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ADVISORY COMMITTEE

ON

RECONSTRUCTION

I. AGRICULTURAL POLICY

Final Report of the Subcommittee

December 16, 1943



OTTAWA
EDMOND CLOUTIER
PRINTER TO THE KING'S MOST EXCELLENT MAJESTY
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The reports of the Advisory Committee on Reconstruction consist of a Committee Report and reports by Subcommittees under the following titles:—

- I. Agricultural Policy.
- II. Conservation and Development of Natural Resources.
- III. Publicly Financed Construction Projects.
- IV. Housing and Community Planning.
- V. Post-war Employment Opportunities.
- VI. Post-war Problems of Women.

I. SUBCOMMITTEE ON AGRICULTURAL POLICY

FINAL REPORT

Terms of Reference

To study the problems of Canadian agriculture, with reference to

- (a) the desirability of raising the standard of living of all Canadians to a desirable nutritional level; and
- (b) the probable development in the international movement of Canadian agricultural products; and
to recommend to the Committee on Reconstruction a comprehensive program for the rehabilitation of Canadian agriculture at the end of the present war.

Membership

Donald G. McKenzie, Chairman; Dr. J. F. Booth; Dr. J. G. Bouchard; J. E. Brownlee*, K.C.; Paul Farnalls; Paul Fisher*; W. E. Haskins†; The Hon. Senator Norman Lambert; T. G. Major*; Dr. W. D. McFarlane; J. S. McLean; Dr. L. B. Pett; Greig B. Smith*; F. E. M. Robinson† and Dr. C. F. Wilson. Dr. L. C. Marsh (Research Adviser); J. E. MacKay (Secretary).

Procedure

The Subcommittee held a series of meetings for direct exchange of views and discussion of problems, collected and studied a variety of informative material, recommended a number of special studies, and called into consultation representatives of several organizations devoted to the progress and welfare of the agricultural industry and also others specially qualified to supply information and to advise on particular problems.

Owing to the great variation in agricultural conditions and problems in Canada and the desirability of having the fullest information and latest views regarding these variations and problems, the advice and co-operation of the Provinces were sought. The Subcommittee held a conference in Ottawa with ministers of agriculture and senior agricultural officials of the Provinces and deans of agricultural facilities and schools. Liaison with the Provinces was subsequently maintained by visits of a member of the Subcommittee to confer with agricultural officials in the various Provinces and by exchange of information with such officials or with committees on agriculture which have been set up in a number of provinces.

Contents of Report

This report contains the following:—

1. A summary of main recommendations relating to agricultural rehabilitation.
2. A statement on the problems of agriculture with conclusions as to desirable policies and measures.
3. A list of special studies, reports and memoranda prepared for the use of the Subcommittee by members, by individuals and organizations at the request of the Subcommittee and submitted to the Subcommittee.

* Invited to join the Subcommittee in addition to original members.

† Resigned.

SUMMARY OF RECOMMENDATIONS

Trade Policy

1. That the freeing of trade relations be accepted as the basic principle of post-war reconstruction in the field of international trade, and that the Government of Canada, representing one of the largest food-producing nations with surpluses to distribute, take a definite lead in promoting at every opportunity the adoption of such an international policy. (Page 12.)

2. That a committee, with adequate staff, representative of the interested Federal departments, be constituted for the purpose of keeping under continuous study ways and means of expanding Canadian trade. (Page 13.)

Export Markets

3. That the Government of Canada, in the international negotiations which are beginning now and which will culminate after the war, endeavour to have wheat made a free-trade commodity throughout the world. (Page 13.)

4. That the Dominion Government establish a National Wheat Marketing Council, to promote the increased export of Canadian wheat and wheat products, this Council to be financed initially by a substantial appropriation from Federal funds and thereafter by an annual levy of not more than one-half of one per cent of the value of the wheat exported. (Pages 14, 15.)

5. That every possible effort be exerted by the Dominion Government to retain existing markets and to restore and develop new markets for Canadian cattle, bacon, cheese, apples, poultry and other farm products abroad; that to this end the Government be prepared to make such arrangements as may be necessary to facilitate payment for these commodities by other nations; and that, should such markets not be available as a result of a general reduction of trade restrictions among nations, action to achieve the desired results be undertaken by the negotiation of trade agreements. (Page 20.)

6. That in order to bridge the transition period from the conclusion of hostilities to the re-establishment of peacetime trade relations, and to facilitate such adjustments as may be necessary during this period, export commitments similar to those now in effect be negotiated with the Government of the United Kingdom; also that action be taken in the domestic field to assure stability at reasonable price levels during this period. (Page 20.)

Marketing Facilities

7. That the question of national marketing legislation be fully reviewed in order that suitable legislation may be provided should conditions in the post-war period make such a step desirable. (Page 39.)

8. That the views expressed in the resolution relating to co-operative organizations adopted at the International Conference on Food and Agriculture be endorsed, and that all governments in Canada use all reasonable means to encourage and assist the organization and development of co-operative activities in relation to agriculture. (Page 40.)

9. That the Dominion Government take steps as early as possible to embody in the Companies Act a part providing for the incorporation of co-operative associations, and in so doing confer with the Provincial Governments with a view to obtaining uniformity of law in the respective fields. (Page 40.)

10. That, inasmuch as modern, efficient and well-organized terminal market facilities are needed in the larger urban centres, the provision of such facilities be given priority in a post-war works program. (Page 40.)

Industrial Utilization of Farm Products

11. That research on the utilization of farm products be extended and that it be organized within the framework of existing institutions. (Page 24.)

12. That a new Government-supported laboratory limited to research on the utilization of farm products and with facilities for pilot-plant investigations, be established in the Prairie Provinces. (Page 25.)

A comparable research service on problems peculiar to agriculture in central and eastern Canada could be provided by the Chemistry Division of the Central Experimental Farm and the Division of Applied Biology of the National Research Council. The new research institute would serve the Province of British Columbia in its lines of research; utilization problems on horticultural products of British Columbia are already being dealt with by the Fruit Products Laboratory at Summerland, B.C. (Page 28.)

Transportation

13. That a conference of the appropriate officials of the Dominion and Provincial Governments be called as soon as possible to consider the provision of some effective, central authority over all inter-provincial motor-truck traffic and services. (Page 38.)

14. That, in order to encourage the extension of all-weather market roads, the Dominion Government give consideration to a policy of subventions to Provincial Governments for the construction of market roads of a specified minimum standard, as part of a post-war works program. (Page 39.)

Nutritional Standards

15. That a council consisting of representatives of the several Federal Departments concerned, be set up to ensure close co-operation in the shaping of policies in the fields of nutrition, domestic production planning and international trade agreements. (Page 22.)

16. That encouragement be given to the supplying of milk to school children and to the provision of hot school lunches in co-operation with local authorities; also that, under stated conditions, consideration be given to schemes such as the United States stamp plan and direct distribution as a means of increasing consumption of adequate quantities of nutritional foods by families with low income. (Page 23.)

Research, Education and Extension Services

17. That the Dominion Government increase its appropriations and enlarge its services on behalf of agriculture, both as regards economic research conducted by the Department of Agriculture and statistical services provided by the Dominion Bureau of Statistics; also that consideration be given to the desirability of providing financial assistance to colleges of agriculture for the expansion of research, teaching and extension work in rural economics, including rural sociology. (Page 29.)

18. That the appropriations for experimental work and for research in the natural sciences be likewise increased. (Page 30.)

19. That facilities for vocational training in agriculture be extended, that capital financing for this purpose be shared by the Dominion and Provincial Governments, and that encouragement be given to the provision of scholarships for deserving students by governments, corporations, co-operative bodies and individuals. (Page 31.)

20. That the Dominion Government explore the possibilities of expanding extension services in collaboration with the Provinces in order to provide the most effective national service possible. (Page 32.)

Land Use and Conservation

21. That in the expansion of research and experimental work special consideration be given to land utilization. (Page 32.)

22. That legislation similar to the Prairie Farm Rehabilitation Act with provisions applicable to agriculture throughout Canada be enacted, and that the administration of such legislation be co-ordinated with the administration of legislation dealing with natural resources. (Page 32.)

Land Settlement

23. That all land settlement be preceded by a soil survey and by classification of the land, and that sub-marginal lands be withdrawn from use for crop production and be set aside for reforestation, community pastures or other suitable use. (Page 41.)

24. That consideration be given to the possibilities of increasing the density of the population in desirable settled areas rather than extending settlement in less promising districts lacking municipal, educational and social services. (Page 41.)

25. That consideration be given to the possibility of providing assistance to farmers' sons desiring to establish themselves on a farm. (Page 41.)

26. That consideration be also given to the preparation of plans for placing settlers on farms available for sale or rent because of the advanced age or infirmity of present operators. (Page 41.)

27. That, if any policy be adopted for extensive admission of immigrants after the war, such policy be broad enough to include persons other than those desiring to settle on the land so that the present ratio of farm to urban population will not by that means be changed. (Page 41.)

Farm Credit

28. That the services available through the Canadian Farm Loan Act be extended by liberalizing the conditions under which loans are made, and that supervision costs be reduced by the use, if possible, of district agricultural agents. (Page 35.)

29. That the Dominion Government give early consideration to the establishment of a Central Mortgage Bank, either under the existing act or a revised act; and that the services of district agricultural agents be used for valuation and administrative purposes. (Page 36.)

30. That in recognition of the contribution of credit unions in meeting the short-term credit needs of agriculture, the Government of Canada join with the Provincial Governments in giving encouragement and support to such organizations. (Page 37.)

31. That, with a view to providing additional short-term and intermediate credit, the Dominion Government make a careful survey of facilities for such credit in other countries. (Page 37.)

Farm Labour

32. That, since inadequate housing on farms contributes to the problem of obtaining farm help, provision be made in any housing scheme for the construction of homes for hired farm workers. (Page 38.)

Farm Amenities and Cultural Activities

33. That, in the forefront of any reconstruction plans and as an integral part of any national post-war housing scheme, provision be made for assisting farmers to build, renovate and improve farm dwellings and to acquire labour-saving devices for the farm home. (Page 43.)

34. That provision be made in Dominion housing legislation for a national home beautification program, including the painting of buildings on farms and in rural villages. (Page 44.)

35. That the Dominion Government give careful study to ways and means of assisting in providing electrical services to rural areas. Capital at low cost is essential for such services and assistance from the Federal Treasury may be needed for their general extension. It is suggested that the Dominion Government might make loans for this purpose to the Provinces, the loans to be repayable over a period of years at low interest rates. Furthermore, it is considered that the construction of transmission lines and generating plants might well form part of a post-war works program for providing employment. (Page 44.)

36. That the Government undertake, as early as possible, a carefully planned and complete national survey of the efforts now being made to promote handicrafts in Canada, and on the basis of the information then revealed determine the nature and extent of services which the Government could appropriately offer for the promotion of useful arts and handicrafts among the Canadian people. (Page 45.)

37. That the Dominion Government encourage the development of community cultural and recreational centres in rural areas by providing, in co-operation with the Provinces, loans to local co-operative organizations at a low rate of interest and repayable over a period of fifteen or twenty years. (Page 45.)

I. AGRICULTURE'S POSITION IN THE NATIONAL ECONOMY

Any attempt to appraise the postwar position of agriculture in Canada should take into account the relation of the industry to the economy of the country as a whole. To establish this relationship it would seem desirable to present certain information on population, capital investment, volume of business and export trade. Statistics dealing with these matters appear in succeeding paragraphs.

Population.—In 1941 Canada had a population of 11,506,655, according to the preliminary census returns, with 5,254,239 classified as rural and 6,252,416 as urban. The farm population was placed at 3,163,288 or 27·5 per cent of the total population. Preliminary estimates indicate that of the total gainfully employed population slightly over 25 per cent are employed in farming.

While the information as to farm population and as to employment suggests that only a quarter, or slightly more, of the people of this country reside on farms or derive their living directly from the land, the more significant factor for purposes of this discussion is the number classified as rural. This very much larger group—45 per cent of the total population—includes the residents of villages and local community centres whose interests are closely related to those of farmers. Any program dealing with rural reconstruction will be of very great concern to these people. Such a program will, therefore, affect directly about half the people of this country. The other half, as will be shown later, have an indirect but vital interest in such a development.

Capital Investment.—The importance of capital investment in relation to reconstruction, and to the national economy, is evident when one realizes that the maintenance of the agricultural plant provides employment for a considerable proportion of the urban population of this country. The investment in agriculture, in 1940, was \$4.5 billion. A substantial part of this is represented in buildings and farm equipment. The amount spent annually for the upkeep of buildings and for farm improvements such as fencing and draining land, is not known but must run into many millions of dollars. In the case of farm machinery, the purchase of repairs and new equipment necessary to maintain the inventory value of such machinery has been estimated at approximately \$50 million annually. This money flowing into the manufacturing industry and through the channels of trade distribution, does much to maintain a healthy economic condition in urban centres.

In subsequent sections of this report reference will be made to farm and home conveniences, including the extension of electricity to a much larger number of farms. If conditions are such as to permit of a much needed expansion in this direction, the benefits to urban industry and to urban workers will be second only to those enjoyed by farmers and their families.

Thus, if one considers agriculture's capital investment in terms of annual upkeep and replacement costs, and adds to that sum the expenditures that will be necessary to give to those living on farms and in rural centres a larger share of conveniences such as are enjoyed by people in urban centres, the importance of this factor in reconstruction will be apparent. And finally on this point, the need of protecting by appropriate measures, an investment of \$4.5 billion represents in itself a reconstruction effort of no small magnitude.

Volume of Business.—Closely related both to the number of persons engaged in agriculture and to the capital investment in the industry is the volume of business, or the proceeds from the employment of labour and capital. In 1942 the gross value of Canadian agricultural production was \$2.1 billion. Of more significance, however, is the cash income from the sale of that portion of the output that eventually reaches the market. This figure, \$1.1 billion, represents the amount the farmers of Canada had to pay their hired help, maintain or improve their plant and equipment, pay taxes, and provide for the well-being and education of their families. Most of this money is spent immediately—much of it, in fact, was actually spent before it was received—and its contribution to rural and urban development is both direct and significant.

The value of agricultural production which, as suggested, contributes so significantly to the national economy, has been substantially greater since the war than in the years preceding it; but if justification is needed for using these higher figures it is found in the fact that they indicate what is possible and for purposes of this discussion are more pertinent than records of the past. They represent what agriculture can contribute to the national income if conditions calling for maximum production at reasonable price levels are maintained.

Export trade.—The importance of agriculture in our national economy is also rather clearly indicated by an examination of trade statistics. In 1940, the last year for which data are available for publication, the volume of Canadian farm products exported, totalled \$323 million. This represented 28 per cent of total exports and was roughly equivalent to the volume contributed by each of two other basic industries, namely, mines and forests.

Almost half of this export business in products of farm origin was represented by partly or chiefly manufactured commodities. Thus farm products represent the basis of a substantial domestic urban industry and to that extent contribute further to employment in our industrial centres. If one were to add

to this the exports of farm machinery and other products, the manufacture of which is dependent upon the larger domestic business within Canada, one obtains further evidence of the significance of agriculture in our national life.

Importance of Exports to the Canadian Farm Economy.—The importance of the export trade in farm products to the national economy, significant as it is, is hardly equal to its importance to the industry of agriculture itself. While it is true that the bulk of the output of our farms is consumed within Canada the surplus that goes into export trade gives vitality and zest to the whole of the farming industry.

The exact relationship of farm product exports to the total volume of farm production is not known. In the case of wheat, roughly two-thirds of our output must find its way to other countries. Substantial quantities of live stock, meats, dairy and poultry products, fruits, vegetables, honey, maple products and tobacco are also contributed to export trade. The value of such products exported as raw materials was \$172 million in 1940. Total cash income from the sale of farm products in the same year amounted to \$766 million. The export figure includes transportation and distribution costs while the cash income figure is the amount received by farmers, and to that extent they are not comparable. However, the products that make up the bulk of these exports are those which carry a minimum of transportation and distribution costs. If to the value of these exports there is added that of the other farm products used in partly and chiefly processed commodities, it would appear that approximately 20 to 25 per cent of the total output of Canadian farms finds its way into export trade under conditions such as existed in 1940.

More study is needed to determine the full effect of the export market on Canadian agriculture and on the national economy. Whether exports represent 10 per cent or 25 per cent of total output may determine whether agriculture experiences depression or prosperity. We need more information on this point. But we know that Canadian farmers can produce, given adequate labour and machinery, a great deal more than a restricted domestic market can consume. Experience has proven this point. It has also proven that when we have an active export market agriculture expands and prospers.

The significance of some of the points introduced in the discussion up to this stage will be further developed in this and succeeding sections. It may be well, however, to conclude this portion of the introduction with the observation that agriculture occupies an important place in our national life; that it represents a resource capable of further expansion given adequate markets; and that an increased volume of trade will contribute greatly to that expansion and to Canadian prosperity.

Variation in Agricultural Conditions.—The conditions affecting agriculture across Canada present problems a little more difficult than those of almost any other phase of the general post-war reconstruction problem, because conditions of agriculture vary so greatly in each of the provinces. The farm problems in the province of Saskatchewan, for instance, are entirely different from those in Ontario; and those in Manitoba are completely different from those in Quebec. The task, therefore, of formulating a national program that will correlate and tend to meet the needs of agriculture in the various parts of Canada is by no means an easy one.

Integration with Industry and Services.—Reference has already been made to agriculture's contribution to national welfare. It may be well to develop this point somewhat. In our efforts to formulate policy, it may be desirable to think of agriculture as an industry engaged in the manufacturing of foodstuffs; an industry that has approximately 735,000 branch factories across Canada, with

each factory facing problems similar to those found in all industrial enterprises. The farmer, like the manufacturer in the operation of his factory, is faced with problems of management, labour, working capital, adequate power supply, overhead costs, finance, factory efficiency, sales promotion, and markets, and it is in the examination of these that we get to the root base of our agricultural problem.

Furthermore, it would be useful to think of the agricultural industry in an all-inclusive sense as embracing the 3,163,288 people living on the land and operating as primary producers, together with those who are engaged in the processing of agricultural products, such as the meat-packing industry, the grain trade, the flour and milling industry, creameries and cheese factories and the fruit and vegetable industry, and also those engaged in the distribution and merchandising of the processed farm products. To these should also be added all those engaged in servicing the industry, namely, the transportation companies, the farm machinery companies, and the manufacturers of all those commodities used and consumed on the farm. It is only by so doing that we can adequately appraise the position of our agricultural industry in the general economy of Canada and give it the consideration it must have in the formulation of post-war programs.

Basic Objective.—It might next be fitting to attempt to define the basic objective we hope to achieve in our post-war planning. Clause 5 of the Atlantic Charter might be taken as defining that objective. That clause reads:—

We desire to bring about the fullest collaboration between all nations on the economic front, to secure for all improved labour standards, economic advancement, and social security.

In our approach to the problems of agriculture, therefore, we seek to satisfy that desire for security in the future on the part of our Canadian people, which we believe can only be ensured by the realization of an opportunity to earn for themselves a reasonable standard of living.

This leads to the question of providing employment and raises the fundamental question as to what creates employment. What is it that makes a job? Is it not simply that the human race desires some goods for services and is willing to exchange money or something else to get those goods or services? When the market exists, production moves into action to supply demand. Therefore, the basic step towards making jobs in Canada is to produce the things that can be sold. We must find ways to increase the volume of those actual physical goods, of those materials that have to be produced, hauled, transferred, stored, transported, refined, manufactured, processed, packaged, transported again, wholesaled, retailed, and delivered. All along the way these goods must be accounted for, must be inspected, handled and rehandled. That is the process that makes jobs. Upon that process of producing and hauling actual physical goods depends the demand for the service activities that grow out of the wealth created and the profits made. Our whole structure of employment rests upon these actual physical goods.

Only four sources can supply these tangible materials: the mines and forests, the sea and the soil, and by far the greatest of these is the soil. Even the forests are a product of the soil. It would seem only logical, therefore, that in our post-war planning we should give primary recognition to the dependence of our whole economic structure on the successful development of these primary industries.

A farm is an individual, capitalistic enterprise. It has two sources of income: cash, from the sale of products; and kind, the land's direct contribution to the family living, such as vegetables and meat for the table and fuel for the

kitchen stove. It has certain expenses as a business, depreciation and the like. It provides a house to live in, which is in the category, not of production, but of consumption goods, for which a fair rental should be allowed.

Land Settlement and National Growth.—The relationship of agriculture to the general well-being of Canada was widely illustrated in the early years of this century when the great tide of immigration flowed into the Prairie Provinces and vast areas of farm lands were settled and placed under cultivation. Not only did this result in a substantial increase in urban population on the Prairies, which depend essentially on agriculture, but in the period from 1901 to 1921, the population of the central Provinces increased at double the rate of any previous comparable period. An article in an Ottawa newspaper of February 28, 1907, contained these words:

Ten years ago this policy of "conserving" the land in unoccupied uselessness came to an end, and the Federal Government took up with courage and resolution the policy of peopling the West with those who are willing and able to bring its resources into use. The results have been as apparent in Eastern as in Western Canada, and, marvellous as has been the change on the plains, it has been equalled in degree by that in Eastern Provinces. Factories which before stood idle are running night and day; employment offers everywhere and at satisfactory wages; capital from abroad is being freely invested in our development and industrial enterprises.

It is probably generally admitted everywhere that good times and bad in Canada have followed closely the graph of the level of incomes enjoyed by the farmers of Canada.

Farm Income.—While the farm population of Canada in 1941 is estimated at 27.5 per cent of the total population of the Dominion, total farm income has recently been estimated by Professor E. C. Hope at only 18.2 per cent of the total income of Canada for that year. Professor Hope's estimate places this percentage considerably higher than estimates previously made by competent authorities and whether one uses the total farm population, or the percentage of gainfully employed as a basis for comparison his figures show farm income to be low in relation to that of other groups.

It may be admitted that all farmers are not good managers and some may be incompetent, but even that does not alter the fact that farm income has been low both actually and relatively. Self-respecting and competent farmers should not find themselves in the position where they have to go before debt adjustment boards to obtain adjustments of debts resulting from inadequate income. Nor should we expect, from a long-term point of view, that farmers would have to accept bonuses or other forms of assistance from governments for any purpose. In the post-war reconstruction period we should seek to get away from such conditions as these and endeavour to obtain for agriculture a status of equality with that of other groups. Agriculture cannot be made attractive to those seeking a means of living unless it can be restored to its historic position of self-dependence and self-respect. Markets for agricultural commodities will not in themselves be sufficient to rehabilitate agriculture. The price received by the farmer for the goods he sells must be such as will maintain a standard of living comparable to that enjoyed by the urban communities and adequate to supply farmers and their families with the ordinary conveniences and comforts of life.

II. EXPORT MARKETS FOR CANADIAN AGRICULTURAL PRODUCTS

It is agreed by the Subcommittee that the export of Canada's agricultural surplus is essential to Canadian farm prosperity and to a sound Canadian economy and therefore that the structure of international trade into which Canada will have to fit after the war is of fundamental importance.

After all plans for the development and improvement of the agricultural industry within Canada itself have been laid down and co-ordinated, the problems of an adequate export outlet for Canadian surplus production remains as the vital factor in the future condition of our farming industry. Because of this conviction, the Subcommittee has devoted considerable attention to the subject of trade policy. It is recognized that in prewar years restrictions in world trade, particularly in food products, were a major factor in contributing to the depressed conditions in agriculture.

In the recent Food Conference, representing the combined and unanimous viewpoint of agriculturists and food experts from forty-four different countries, the vital importance of facilitating free international exchange of goods was definitely expressed. As a means of bringing relief to famine-stricken areas of the world in the immediate post-war period, as well as to those food-producing countries with surpluses on hand, the removal of all barriers to trade was recommended. The Subcommittee desires to associate itself with the findings and recommendations of the International Food Conference by urging "the reduction of every kind of trade barrier and the adoption of methods to reduce costs of distribution in international exchange."

As a long-term policy of international relations, the Subcommittee recommends that the freeing of trade relations should be accepted as the basic principle of post-war reconstruction, and believes that unhampered trade and intercourse between men and nations is not only essential to immediate relief of needy peoples after the war but also to lasting world peace and harmony, and that the right to buy and sell freely in the markets of the world is fundamental to the prosperity and well-being of all industrial enterprises in general and of Canadian agriculture in particular. Accordingly, the Subcommittee urges that the Government of Canada, representing one of the largest food-producing nations with surpluses to distribute, should take a definite lead in promoting at every opportunity the adoption of such an international policy.

It is expected that the immediate postwar period will be characterized by a heavy demand on the part of the freed European countries. Canada will undoubtedly be called upon, whether under payment or as a national contribution, to provide foodstuffs for international relief, particularly grains, live stock and live-stock products. Within this period the groundwork will have to be laid for transition of international trade to a commercial basis. After immediate relief demands are met, trade expansion and agricultural prosperity will depend on the extent to which foreign markets are available as a result of reduction of trade barriers regarding basic foodstuffs.

Improvement in dietary standards, in the world generally and in the more backward countries particularly, is clearly one of the biggest avenues to larger markets for many agricultural commodities. Particular attention should be given to the proceedings and implications of the United Nations' Conference on Food and Agriculture, of which the Interim Commission, headed by a Canadian, is now in session.

It is entirely compatible with the restoration of the principle of unrestricted trade that every endeavour should be made to plan and organize the expansion of Canadian trade in a systematic fashion. In the period immediately after the conclusion of hostilities, or possibly during a period in which only some

of our present enemies remain as belligerents, some of the wartime controls will have to be continued in operation for the modified purpose of co-operating with the United Nations in the provision of relief. During this period Canada must have a definite policy if the transition towards unrestricted trade is to be effectively made.

It is realized that the expansion of trade is interlocked with the question of eliminating discriminatory trade practices and securing certain standards of equality of access to markets. Trade in Canadian agricultural products cannot be considered apart from Canada's purchases of imported goods. The transition to unrestricted trade may have to be made by progressive adjustment and by concerted action with other governments. The machinery of transition may take the form of tariff ceilings and the extension of the reciprocal trade agreements.

Should other countries fail to support these measures it may be necessary to adopt provisions for international commodity controls or for the continuation of the wartime contract system. Under such conditions regulation and control in the domestic field—actions that would be incompatible with conditions of freedom of access to international markets—may also become necessary. The Subcommittee believes that such a result would be most unfortunate and desires to record the view that only through access to world markets on a generous scale can Canadian agriculture be made prosperous. The attainment of such an objective will depend upon multi-lateral action on reduction of trade barriers—not upon the securing of small reforms in the technique of trade.

The Subcommittee recommends that a committee, with adequate staff, representative of the interested government departments, for example, External Affairs, Trade and Commerce, Agriculture, Fisheries, Mines and Resources, be constituted for the purpose of keeping under continuous study the ways and means of expanding Canadian trade. It is essential that some appropriate authority within the governmental framework should be concerned with Canadian export and import trade as a whole. The experience and work of the various food boards and purchasing agencies should be utilized in this connection. The scope of the problem should include the promotion of trade as well as the removal of trade restrictions.

1. *Post-war Wheat Markets*

Wheat markets must be established and retained after the war if there is to be any sure foundation for western agriculture. Farmers may require government assistance to carry agriculture through the post-war period of readjustment, but in the long run they must look to what they produce on the farm and to its satisfactory sale to provide the basis for their economic life and to bring about improvements in their standard of living. For years to come, as has been the case in the past, satisfactory agriculture in Western Canada must depend upon grain and primarily upon the production and export of wheat. The primary problem for western agriculture is to establish and maintain satisfactory outlets for wheat. The west cannot for long depend upon the Government of Canada to do what has recently been done, to provide a market, to buy great quantities of western wheat and send it to other countries under the Mutual Aid Plan. Markets must soon again be thought about in terms of buying and selling. Neither marketing machinery nor government assistance will for very long assure a satisfactory living, for the number of people now employed in western agriculture or for the number Canada will desire to keep upon western farms, unless markets and reasonable market prices are available.

The first definite proposal the Subcommittee put forward in this connection is that Canada, in international negotiations which are now beginning and

which will culminate after the war, should endeavour to have wheat made a free-trade commodity throughout the world. It is recognized that progress toward this objective depends upon its acceptance by the wheat-importing countries, which in turn depends upon the assurance of international security and the taking of their export products in exchange for wheat and flour. While favourable consideration to wheat as a free-trade commodity may have to be given within the scope of broader trade negotiations, the removal of trade restrictions from wheat and from foodstuffs generally should be a primary objective.

It is clear from reports of the International Food Conference that there must be a great increase in world food production if the world is to be adequately fed. The nations assembled at that conference were urged to bring about higher standards of nutrition and it was there shown that in even the most advanced countries undernourishment prevails among a considerable part of the population. Canada must vigorously follow up that idea. It can be shown that higher nutritional standards in many countries can only be reached if such countries, instead of keeping land in uneconomic wheat production, are willing to import wheat and turn a large part of their present wheat acreage to production of meat, milk, butter, eggs and similar foods which, unlike wheat, cannot be advantageously imported but must be produced at home.

Further, it can be shown that for some time after the war various countries can be fed adequately only if Canada continues to produce agricultural commodities to the limits of her capacity. Such maximum production in Canada will only be possible if a high degree of confidence is maintained with respect to the agricultural future of this country, and if farmers and the country generally can rely on some permanence of demand. Production in Canada, and doubtless also in other countries, would be tremendously hampered by fear of continued resort to those restrictive policies which developed so largely between the wars.

Two factors have been relied upon to advance the sale of Canadian wheat in the past. One was the Canadian flour trade, which led the way for Canadian wheat into many markets and by demonstration of quality created a demand for high-grade flour which can only be made by an admixture of a considerable proportion of hard wheat. But Canadian flour is now excluded from the greater part of the world by special tariff proportionately higher against flour than against wheat. The other factor was government grading of grain, highly important in meeting the demand of millers and bakers for a standard of grain that could be relied on. But these factors are not alone sufficient to ensure a market for Canadian wheat.

Wheat has become a national problem that is likely to remain as such in Canada for a considerable time. The country will constantly be in a position of requiring a wheat policy. To formulate such a policy, complete information and sound opinion, supplemented by expert advice and special study, are required. It will be of great advantage if governments are able to turn to an impartial and well-equipped organization for opinion and advice, and the need of this direction is a continuing one.

The Subcommittee believes the national importance of the wheat marketing problem warrants the establishment of a National Wheat Marketing Council, adequately financed by a substantial initial appropriation and thereafter supported by an annual sum of not more than half of one per cent of the value of the wheat exported. The Council should be given full authority to engage the necessary staff and to undertake two broad functions, namely, the collation of material for use in trade negotiations where wheat and flour are concerned, and the development of sales promotion efforts to take advantage of

the trading opportunities as they arise. To this end the Subcommittee recommends that such a marketing council be established, the personnel to include representatives of government departments or agencies concerned with wheat and flour, and representatives of organized producers and the trade.

National Wheat Marketing Council: Functions and Fields of Action.

The primary purpose of the Council would be the increase of Canada's export trade in wheat. That would mean direct efforts to interest consumers, bakers, millers and other processors abroad in Canadian wheat and wheat products. It would also devote attention to commercial problems, certain problems of production and problems of trade relations. A classification of the Council's functions may be made as follows:—

i. *Focusing Information at Present Available Bearing on the Disposal of Canadian Wheat.*

There is already in existence a great body of statistical and other information bearing on Canadian wheat and competitive products, but such information needs to be focused in order to be of the most effective use.

ii. *Commercial and Economic Research Concerning Markets for Canadian Wheat.*

Besides the information already available, new facts and information ought to be developed concerning conditions affecting the markets for our grain. In almost every country where Canadian wheat is or might be sold, more information is required in order to make satisfactory efforts on behalf of Canadian wheat. Some of this information can be developed through existing sources. In other cases it would be necessary either to make use of special representatives sent from Canada, or to obtain local assistance from time to time, or frequently to make use of both. Such information would deal not only with the requirements of millers, but also with the final markets on which bread, flour and other products are disposed of. In addition, the Council would undertake investigation of the continuing need in certain European countries for wheat of the Canadian type in spite of the fact that their production of wheat of a different type now exceeds home requirements for that type of wheat.

iii. *Guidance and Exploitation of Scientific Research.*

The Council would submit to the National Research Council, to the laboratory of the Board of Grain Commissioners and to other scientific bodies in Canada, scientific problems requiring research and would arrange work on similar problems in milling and baking laboratories abroad. It would not find it necessary itself to set up a laboratory or engage in laboratory work.

While exploring the possible new commercial uses for wheat, much requires to be done along other lines concerning present uses. For example, the use of flour from Canadian wheat by bakers in some countries is less than it might be because it is not regarded as suitable for the baking machinery or methods there in use. Again, the manufacture of macaroni and other similar products from ordinary varieties of Canadian hard wheat instead of from Durum wheat, which is grown only to a limited extent in Canada, requires special investigation. But scientific investigation of the kind suggested can only be effective when there is an organization prepared to exploit the results of research. Such research as has already been done has lacked effectiveness because channels have been lacking for putting information secured to the best use. The Council should therefore institute:

Research into difficulties connected with established methods of baking in different centres abroad which work adversely to the employment of larger quantities of Canadian wheat.

Investigation of advantages of using a considerable proportion of flour from Canadian wheat along with rye flour in countries which consume large quantities of the latter.

Study of the availability of wheat of the usual Western Canadian type for the manufacture of macaroni and allied products.

Preliminary work on the possible industrial uses of Canadian wheat.

iv. *Direct Advertising and Merchandising Work on Behalf of Canadian Wheat and its Products.*

Advertising and merchandising work on behalf of Canadian wheat would be carried out with the greatest care to enlist the co-operation of merchants, millers and dealers. To emphasize the need for such work it may be pointed out that, while complete organization exists to offer Canadian wheat daily to millers throughout the world who may desire to buy it, little has been done to stimulate a demand on the part of the millers' customers, whether bakers or ultimate consumers, for the flour which can only be made when wheat of the Canadian type is employed. In addition, while a large part of the milling industry of the world is fully informed as to Canadian wheat, it is also the case that in many mills, particularly outside of Great Britain, such information is lacking. That situation was intensified in the pre-war years by special tariffs and import quotas, directed more against flour than against wheat, and which have resulted in expanding milling in various countries.

Sales promotion work might be organized as follows:—

Advertising.—Advertising campaigns, directed to the baking industry not only in Great Britain but elsewhere, to impress upon that industry the fact that its own interest will be served by maintaining bread quality through adequate use of Canadian type wheat.

Advertising to promote the greater use of wheat for feeding purposes, particularly to poultry.

Merchandising.—Sending representatives to interview certain sections of the milling trade abroad, and more especially at first where tariffs and quotas have previously excluded imported flour. This would be to ensure co-operation of millers in respect to campaigns which might be later undertaken, and also to make sure that they are fully acquainted with the advantages of using Canadian wheat.

Publicity.—Issuance of reports, and circulation where they will be most useful, dealing with:

Advantages of use of wheat of Western Canadian type.

The small additional cost to consumers abroad of ensuring high quality bread through adequate use of Canadian wheat.

The importance to Great Britain, in the interests both of British investors and of British trade, of maintaining a large flow of wheat from Canada to the British market.

v. *Trade Relations.*

The Council would equip itself to be of utmost possible use to the Government whenever opportunities arise for improving trade relations with other countries. While the responsibility for such relations rests with the Government, it should be able to call upon a fully-informed source for information as much with the wheat industry as is the case with other industries.

In almost every country where trade relations with Canada may come under Government consideration from time to time there are special aspects of the wheat situation. On these the Council would not only be equipped with information when called on, but would be able to make suggestions on its own account to the Government.

vi. *Acting as a Source of Information to Individuals and Organizations Dealing in Canadian Wheat and Flour, Bread, Macaroni and Other Products Made From Such Wheat.*

The Council would be a source of information for merchants, millers, bakers and others handling Canadian wheat throughout the world. Some of the information would be disseminated by printed publications. At other times it would be conveyed directly to those who would find it advantageous to make use of it.

2. Live Stock and Live-Stock Products

BEEF CATTLE

For a considerable period of years Canada has exported a substantial volume of beef cattle. At the close of the last war the number of head reached a total as high as 450,000. Since that time the movement has varied a good deal but in most years has ranged between 150,000 and 230,000 head. For a time during the 1930's the larger proportion of Canadian exports went to the United Kingdom. Since the reduction of the United States tariff under the Canada-United States Agreements of 1935 and 1938 the trade rapidly shifted again to the United States and since 1940 has been entirely with that country.

Recently due to the curtailment of total meat supplies in Canada resulting from heavy exports of bacon to the United Kingdom, increased domestic consumption of beef has greatly curtailed the volume available for export. Moreover, what surplus there is above Canadian consumption requirements is, by agreement with the United States, being exported to the British market in the form of carcass beef.

It is important that in any consideration of post-war markets abroad for Canadian farm products due attention be given to the export trade in beef cattle. Steps should be taken to ensure that Canadian cattle again find their place on the United States market, which the industry in this country considers to be the normal outlet. The importance of this is suggested by the information already quoted with reference to exports, but it is more apparent when it is realized that the increase in prices resulting from access to United States markets is reflected throughout Canada and results in higher prices for all of the one million one hundred thousand cattle marketed annually.

DAIRY CATTLE

A substantial number of Canadian dairy cattle is exported to the United States annually. Prior to 1941 the volume was from 12,000 to 15,000 head annually. Since that time it has increased considerably and may exceed 40,000 in 1943.

While not a large factor in terms of the total number of dairy cattle in Canada, these exports have had, over the years, a very beneficial effect on the dairy cattle industry. Although there has been some criticism connected with the larger exports of recent years, in view of Canada's commitments on dairy products to the United Kingdom, it is felt that such criticism is unwarranted. It can be shown that far from reducing the number of dairy cattle in Canada, these exports to the United States stimulate production and result in more cows on farms, and a larger volume of dairy products than would be the case were such trade to be curtailed.

There is every reason to believe that this trade, if permitted to develop, will continue to be an important factor in the dairy industry of this country, particularly of the eastern provinces. Every effort should be made to encourage it in the post-war years.

BREEDING STOCK

Discussions dealing with the relief requirements of European countries in the post-war period usually emphasize the depletion of herds and flocks and the necessity of providing for their replacement as rapidly as possible after the cessation of hostilities. The Subcommittee lacks information as to the possible extent of this depletion and moreover is aware that at the close of the last war, when a similar condition was thought to exist, actual exports of breeding stock were very small.

It is pointed out, however, that should it be found that there is a substantial need for such stock Canada will be in a position to contribute. The extent of this contribution will of course depend upon the requirements for live-stock products. While Canada could supply a considerable volume of certain classes of breeding stock without reducing her production and export of eggs, cheese, bacon, etc., any material contribution would reduce the production and subsequently the exports of these products. Perhaps the only thing that can be said at this time is that Canadian farmers are in a position to contribute either live animals or live-stock products in considerable volume. It is important, however, to recognize that Canada's live-stock numbers have been built up very considerably during the war, and that any substantial reduction in the trade in live-stock products would suggest the desirability of doing everything possible to ensure a market for live animals. The possibility of trade with Russia along these lines should be explored.

BACON

Since the start of the war Canada's exports of bacon to the United Kingdom have rapidly increased in volume, as the following figures show:—

Year	Pounds	In Terms of Hogs
1937	192,058,700	1,600,488
1938	169,463,600	1,412,188
1939	186,473,000	1,553,941
1940	344,147,100	2,867,892
1941	460,800,200	3,840,000
1942	524,951,900	4,375,000

For 1943 the goal set for bacon exports to the United Kingdom was approximately 675,000,000 pounds.

The average export of Canadian bacon to the United Kingdom for the five years immediately before the war, 1935 to 1939 inclusive, was 165,418,220 pounds. Accordingly Canada's exports to Great Britain in 1943, if the above objective is reached, would be approximately four times as great as were the average annual shipments for the five-year period before the war. No great imagination is necessary to visualize the effect on the live-stock industry of this country if any substantial proportion of this market is lost after the war.

The Subcommittee accordingly recommends that every endeavour be made by the Government to retain a market in the United Kingdom for a substantial part of the trade in bacon and pork products, and draws attention to the recommendations made at the end of this section of the report.

CHEESE

Exports of cheese from Canada to the United Kingdom reached a low point of just over 52 million pounds in 1935. The increase that had already amounted to 30 million pounds annually when war came, has been added to

substantially each year since. In 1942 shipments to Britain were more than two and one-half times the volume of 1935, and in 1943 may exceed that amount.

It is not expected that in the long run Canada can retain a market for such a volume of cheese in the United Kingdom. Competition of other countries and more profitable outlets for milk in the home market will in due course bring about some reduction in the manufacture of cheese. Access to a more profitable United States market would hasten the decline of overseas shipments. In the absence of an increased trade with the United States any rapid decline in overseas export trade would make adjustments in the dairy industry of Ontario and Quebec very difficult.

While it is hardly to be expected that such a development will occur immediately following the cessation of hostilities since requirements for relief purposes may be expected to absorb any surplus available, it could come before the industry in this country was prepared to absorb the shock. It would seem desirable, therefore, to provide if possible for a continuation of the present form of commitment for a period sufficient to cover the most severe stages of adjustment. As conditions become more normal Canadian dairymen should be in a position to meet foreign competition and to make, unaided, the long-time adjustment that may be necessary in their industry.

3. Other Products

Canada's export trade in farm products has been affected in various ways by the war. Due to the curtailment of supplies from other countries Britain's requirements have been met in larger measure than in peacetime by the United States and Canada. In addition to wheat, bacon and cheese, to which reference has already been made, certain other products such as eggs and dehydrated fruits and vegetables have been in greater demand and Canadian exports have increased materially.

A second group of products including apples and tobacco have been adversely affected by the war's developments. In the case of apples it was found necessary for the Government to provide assistance to help maintain the industry. But arising out of the difficulties encountered there has developed a marked expansion in the manufacture of apple juice, canned and dehydrated apples. These products together with an increase in domestic consumption of fresh apples have eased the problems of both the industry and the Government.

In the case of tobacco a greatly increased domestic consumption, together with the heavy demands of the Armed Forces, has offset the reduced market abroad.

Certain other products, constituting what might be considered a third group, have been affected more by the curtailment of the supplies of alternative products, or by increased domestic consumption, than by changes in the export situation. Thus a greatly increased domestic purchasing power and a reduction in sugar imports have combined to increase the domestic consumption of honey and maple products. The reduction in exports of honey to the British market has accordingly not been felt so seriously as might otherwise have been the case.

These changes in export trade have necessitated marked shifts in the production pattern on Canadian farms and many farmers are concerned about what may happen after the war. Can we retain our present market for the products which are now in great demand? Can we regain our trade in products that are not now being exported? What further adjustments will be necessary in Canadian production programs?

4. Recommendations

(a) The Subcommittee does not feel competent to answer all the questions that might be raised in this connection. It believes, however, that if in the long run the program suggested in this report becomes a reality and trade expansion is achieved, many of the problems that now appear likely to call for solution will prove of little consequence.

There will, however, be need for the exertion of every possible effort by the Government and by agencies engaged in export trade, in placing Canadian products on available markets. It is expected that this effort will be forthcoming. But more than that is required. Trade is not a one-way business. Unless Canada provides a market for the products of other countries no permanent outlet for the products of Canadian farms can be expected. It is essential, therefore, that steps be taken to ensure a market in this country for the products which in turn will pay for Canadian products exported. Other measures are necessary to ensure export sales, and some are suggested in this section, but none of these can be effective unless a means of payment is afforded those to whom Canadians would sell their products.

The Subcommittee believes that the most effective way of achieving a satisfactory exchange of commodities is by a general reduction of trade barriers and other restrictions. Accordingly the Subcommittee directs attention to the recommendation made earlier in this report and again urges Canadian participation in any program designed to achieve greater freedom of trade. Should no such general program develop, every effort should then be made by Canada to negotiate such trade agreements as will ensure the most satisfactory outlets possible for Canadian farm products.

(b) Canada may enter the post-war period with surpluses of certain farm products. Whether this will be the case or not will depend to a considerable extent upon the duration of the war and the progress in liberating various countries now occupied. In any case, however, the farms of this country will be producing at a capacity in excess of domestic requirements and pre-war export outlets.

It is assumed that in the long run markets will be available for all of the products that can be contributed by this country. Before this program develops, however, substantial re-adjustments may be necessary in Canadian agriculture. During this period there may be a good deal of uncertainty as to the future. There may be violent price reactions unless steps to prevent such are taken. Recognizing this possibility, the Subcommittee considers that certain steps might well be taken immediately following the war, or even before, to assure reasonable stability in farm prices and income. One way to achieve this end would be to extend the present export contract commitments for a period of a year or more after the cessation of hostilities. Another method would be to provide some assurance as to domestic prices, either by way of subsidies or support prices during the period in question. A combination of the two might prove more effective than either one alone.

III. NUTRITIONAL STANDARDS AND DOMESTIC CONSUMPTION

The raising of nutritional standards has been considered by the Subcommittee both from the viewpoint of improving the health of Canadians and of its effect on domestic consumption of farm produce and hence on the production patterns of Canadian agriculture.

The Subcommittee is in agreement with the recommendations of the United Nations Conference on Food and Agriculture that a sound food and nutrition policy must be adopted if the national diet is to be progressively

improved in the interests of national health. It also recognizes that such a policy requires the closest integration of government bodies charged with the responsibility of interpreting the science of nutrition and of relating production programs to food requirements in the light of national conditions.

One of the first requirements of a desirable standard of living is that all families get adequate food. There is sufficient evidence of malnutrition in Canada to indicate that a greater quantity and a greater variety of food should be consumed. This is true for city population and may be true for farm population also. The maintenance of a minimum level of food consumption would improve national health and would help to widen the market for agricultural products.

1. *Changes in Nutrition Practices*

Both education and increased consumer purchasing power have created demands for foods previously considered luxuries. These have taken the form of increased consumption of meats, fish, dairy products, eggs, fresh fruits and vegetables and decreased consumption of the staple diets such as cereals and potatoes.

The war has accelerated the development of a greater appreciation among people for variety and adequacy of food, and the post-war demand will be for a more balanced diet. The shifts in demand are also due in part to the increase in the number engaged in sedentary occupations and to technological improvements which have enabled the products to be placed on the market at lower prices.

The trends in consumption which occurred in the last three decades were interfered with by depressions and income fluctuations. But there is little doubt that low-income groups, both rural and urban, bore the brunt of decreased food consumption, their eating habits varying with their purchasing power.

If we are to meet proper nutritional standards, the production of agricultural products in Canada will require some modifications in the post-war period. Such modifications will raise problems of adjustment. Certain changes, such as the growing of one crop in place of another, may be accomplished without undue dislocation of farm practice. When change means new machinery or capital investment of some kind, assistance involving adequate credit facilities may be necessary.

2. *Production Implications*

The planning of an agricultural program for Canada in relation to dietary needs involves the determination of what food is required and where it shall be produced.

The recent United Nations Food Conference has outlined on an international basis the major problems to be solved for further increases in food production. The questions which are vital to Canada are: first, to what extent can nutritional requirements be met by domestic agriculture; second, how much can a possible reduced export of any product be met by an increased domestic demand, or alternatively, if exports of certain commodities are maintained or increased, what changes in agricultural production will be necessary to meet domestic nutritional requirements. These questions will not be answered by any simple formula, but by a process of continuous planning and by endeavouring to fit together policy in the fields of nutrition, domestic production objectives and international trade agreements.

3. *Method of Co-ordination*

The attainment of the objective desired will require the closest co-operation between the several departments of government concerned with health, food requirements and food production. To assist in reaching this objective the Subcommittee recommends the creation of a council made up of representatives of the several departments concerned.

Such a Council might be expected to assist in co-ordinating the work of the respective departments in matters having to do with nutrition and with the provision of food adequate to meet accepted dietary standards. To it might be referred matters in the field of nutrition, arising out of the work of the Permanent Organization, United Nations Conference on Food and Agriculture; or arising out of the work of the several departments, and of concern to the Permanent Organization.

A body of this nature might be entrusted with duties associated with international relief needs. It could also be of service in relating production possibilities to domestic and international nutrition programs in the transition and longer run periods.

Such a Council would act only in an advisory capacity; but in affording the means for the consideration of matters of concern to several administrative departments it could prevent misunderstanding; eliminate duplication of effort, and pave the way for positive action in the attainment of higher nutritional standards in Canada.

4. *Suggested Food Policies*

The Subcommittee was specifically requested to consider the problems of Canadian agriculture with particular reference to "the desirability of raising the standard of all Canadians to a desirable nutritional level. . . ." Accordingly a good deal of consideration has been given to this aspect of the general subject.

The Subcommittee has examined the results of studies dealing with consumption habits in this country. These studies were made prior to or during the early part of this war. They reveal that while the average per capita consumption of most foods was relatively high there were deficiencies in some of the protective foods. They indicate that there was a very close relationship between the income of the family and the quantity consumed of such protective foods as meats, eggs, dairy products and fruits. In some instances the per capita consumption of these foods in families of low income was less than one-third of what is considered by nutritionists to be a desirable standard. In all cases the quantities consumed by a considerable proportion of the population were low.

The Subcommittee has given consideration to the measures adopted in other countries to meet conditions similar to those found in Canada. In particular, a special study of the United States program was made. This study dealt both with the nutritional aspects and the effect of programs in actual operation on the disposal of surplus farm products. These programs include direct distribution, the stamp plan, school lunches and special arrangements for the provision of milk to school children.

It is to be observed that authorities on consumption habits emphasize that income is the most important factor determining what individuals consume. It is also to be noted that lack of knowledge concerning the nutritional properties of different foods is considered to have a significant effect on the choice of foods.

Adequate Income.—In relating this information, and particularly the conclusions drawn, to the provision of a post-war program, the Subcommittee considers that the major problem to be faced is that of obtaining conditions

that will ensure an adequate income to the people of this country. And that second only to this will be the provision of knowledge that will enable people to select the foods necessary to good health.

Concerning the first of these two requirements the Subcommittee draws attention to the measures recommended elsewhere in this report and suggests that the implementation of these will do most to ensure a satisfactory income to the people of this country. Briefly summarized these measures include:—

i. The elimination of policies that have encouraged inefficient production and stifled the exchange of goods and services between countries.

ii. Collaboration with other countries in putting into effect the recommendations of the United Nations Food Conference.

iii. The development of domestic policies that will ensure full employment at wages sufficient to ensure a reasonable standard of living to all who desire to work.

The implementation of such a program will, in the opinion of this committee, do most to assure the income necessary to the attainment of the nutritional standard desired. However, if such a program does not become a reality or if its application is long delayed, and conditions such as prevailed during the 1930's return, measures to provide for increased consumption by families with low incomes may be necessary. In that event the adoption of a program such as the stamp plan, supplemented by direct distribution, school lunches and other means of increasing consumption to the needy, should be encouraged. The information provided in the Subcommittee's study of United States programs and the suggestions accompanying that report concerning the application of such a program to Canada, should prove of value.

School Lunches.—The Subcommittee considers that an exception might well be made to its general conclusion on this matter, in the case of children attending school. It is recognized that many children are unable to go home for lunch and that lunches taken to school do not contain the milk, fruits, and other foods so necessary to health.

It has been found that where hot lunches are provided at school or where milk and other beverages are added at the school to the lunches brought from home, the result in terms of health and mental alertness is very significant. It is also recognized that, although lack of family income contributes to the problem in this instance, the more important consideration is community organization and the provision of some financial assistance to school authorities, parent-teacher bodies or other groups to encourage organization and interest in such a program.

It is recognized that this may be considered a field for provincial action but the Subcommittee would urge that if a way can be found by the Departments of Agriculture or Pensions and National Health to support such a program, steps to that end should be taken.

Information on Nutrition.—With further reference to its general conclusion under this heading and as already noted, possession of the income necessary to purchase the right kind of food is no assurance that such foods will be purchased. Lack of knowledge as to the qualities of various foods and as to the beneficial effects of good nutrition is an important factor determining consumption habits.

The Subcommittee accordingly commends the efforts now being made by Dominion and provincial authorities to obtain more information on the properties of food and to ensure a wider diffusion of knowledge concerning nutritional matters. It urges that such activity be given added support. It also suggests that as far as possible activities in this field, both research and educational, be co-ordinated with the program of the Permanent Organization, United Nations Conference on Food and Agriculture.

IV. INDUSTRIAL UTILIZATION OF FARM PRODUCTS

Industry has long been interested in the utilization of farm products, residues and wastes; the raw material of some of our oldest and largest industries is exclusively of agricultural origin. The depression period focused attention on the need for more research in this field, particularly in regard to the utilization of the main products which could not be disposed of in their original and most common form, e.g., wheat. The war provided an exceptional opportunity for agriculture to demonstrate to industry that it could produce raw materials essential to the prosecution of the war and to replace many commodities which were formerly imported.

A survey of Canadian research on the utilization of farm products¹ reveals that in the past agricultural research has been directed mainly to increasing production; in the future, greater emphasis should be placed on utilization problems. The search for new outlets for farm products is of primary importance in the long-range consideration of marketing problems.

The Subcommittee therefore recommends that research on the utilization of farm products be extended and that it be organized within the framework of existing institutions.

Two clearly-defined types of research are involved: "fundamental research" and "development research", each of which requires appropriate facilities.

1. Research Facilities

(a) *Fundamental Research*

Studies on the chemical structure and properties of the complex constituents of animal and vegetable matter are basic to the development of new processes for the manufacture of industrial commodities from farm products. Research of this nature is an essential function of the universities and should be encouraged by extending the research scholarship policy of the National Research Council. Of course it may be necessary to conduct fundamental research in government laboratories engaged in applied research. The universities have an added responsibility to train chemists and chemical-engineers with experience in agriculture and industry.

(b) *Development Research*

It will be obvious that when an invention has been made in the laboratory much has still to be done before it can be commercialized. Small-scale manufacture in a pilot-plant has to be undertaken in order to establish the best conditions for production and to accumulate data for the design of a full-scale plant. This is primarily the job of industry; but there is also a vast body of work which must be done under government auspices. There are many investigations which are desirable in the national interest, and from the results of which the community as a whole would benefit but which are too far from being straight forward commercial propositions to be undertaken by any independent concern or even by organizations such as research associations. Many research projects on farm products (some of which are reviewed below) are of this nature and are outside the scope of fundamental and industrial research.

To devise new or improved procedures and equipment for processing farm products and by-products and to design typical plants adapted to economical construction and operation in such processes, requires a mass effort by specially

¹Published by the National Chemurgic Committee of the Canadian Chamber of Commerce, May 1941.

qualified chemists and engineers comprising a single research unit. Furthermore, it will often be necessary to enlist the active co-operation of an enterprising group of farmers to obtain raw material of the desired type and quality and to establish the cost of its production. These farmers should be located in an area adapted to the growing of crops for producing industrial raw material. Collaboration with potential consumers must also be established in order to assess the merits of the product and to determine the most advantageous form in which to produce it.

The Subcommittee therefore recommends the establishment, in the Prairie Provinces, of a new government-supported laboratory limited to research on the utilization of farm products and with facilities for pilot-plant investigations.

It is believed that the plans for this new laboratory should include a fairly large building with a staff of at least twelve professional men, an equal or greater number of laboratory assistants and such administrative officers and secretarial staff as might be required. Specialists would be required to lead projects on oils, carbohydrates, cellulosic materials and proteins. A pathologist and bacteriologist would be required if any fermentation work is undertaken and for pilot-plant work it would be advisable to employ men with engineering training.

For obvious reasons the laboratory should be located in one of the universities. To investigate specific problems pilot-plant installations might have to be erected in the particular area best adapted to industrialized agriculture and to growing the crops involved.

It is also suggested that an alcohol plant with a capacity of 5,000 gallons per day and of the most modern design be erected "in a carefully chosen area in regard to water supply, etc., but as near as possible to the research institute and operate under its control." Such a plant, engaged in commercial production, would be necessary to establish the costs of producing alcohol from various farm products and by various processes. It would also be an indispensable adjunct to research; the objective of which is to develop a co-ordinated industry making full use of the starch, gluten, germ and structural carbohydrates of the wheat kernel—a counterpart to the corn industries of the United States.

2. *Liaison with Industry*

The fullest co-operation of industry could be procured through the National Chemurgic Committee acting in an advisory capacity and assisting in formulating plans for the work of the laboratories. This committee is comprised of agriculturalists, industrialists and research chemists and has at its disposal the machinery through which to enlist the interest and co-operation of local Boards of Trade, Chambers of Commerce, and branches of the Canadian Society of Technical Agriculturalists. Through these organizations problems could be considered from the national standpoint, information disseminated regarding the technological aspects of the utilization of various farm products, and recommendations received for establishing local industries.

3. *Rural Industries*

It is believed that research to develop rural industry would contribute most to the solution of post-war problems. This kind of industrial development would have the most direct beneficial effect on agriculture. It would provide an opportunity for the employment of surplus agricultural labour and so encourage young men to stay in rural areas; increase economic independence by diversifying markets and producing finished or semi-finished goods instead

of raw material; and decrease waste in handling, storing and transporting the products. The success of decentralized rural industry will depend to a large extent on the designing of typical plants and improved equipment for processing agricultural materials and their by-products.

4. *Proposed Initial Research Program*

To obtain a fairly complete knowledge of present activities the Subcommittee commissioned a study of the research on the industrial utilization of farm products of interest to Canada, being carried on in the Regional Research Laboratories of the United States Department of Agriculture. A review of this report and of the National Chemurgic Committee's report on Canadian research suggests the following projects for first consideration in the promotion of rural industries:—

i. *Utilization of Straw and Other Agricultural Residues.*

The most important problem in connection with the utilization of agricultural wastes is their economic collection and segregation. Although farm wastes are intrinsically of little value, collection costs are generally high. Agricultural engineers recognize this and are actively engaged in studying the problem of cutting down these costs. The largest industrial use of straw, 600,000-700,000 tons per annum in the United States and mainly wheat straw, is for the manufacture of corrugating strawboard.

(a) *Manufacture of building materials as part of a post-war scheme for improving rural housing.* Specifications would have to be worked out for small-scale manufacture of wallboard, structural insulation and other building materials. In this connection consideration should be given to the small-scale manufacture of low-cost plastic materials which can be made from some abundant raw material, such plastics to be used as decorative wall coverings, as fittings and for sundry other building purposes. The furfural to be used in the manufacture of these plastics could be produced locally from waste hemi-cellulose materials.

It is believed that plastics can be produced from farm wastes, with characteristics suitable for many commercial uses, at a price which will make them competitive with synthetic materials.

(b) *Pulping operations as a community co-operative enterprise.* Straw is being used increasingly in Europe for paper manufacture. The use of a special fibre, seed-flax straw to produce a special result in paper making, i.e., cigarette paper manufacture, not obtainable with wood-fibre, suggests a logical use of other cereal-straw fibres for cellulose purposes, namely for specialty papers.

ii. *Processing Oil-Seeds as a Rural Industry*

Instead of transporting oil-seeds long distances to large extraction plants, located in cities, and shipping the by-product meal back to the farms it might be more logical to process the seeds in areas where they are grown and where the by-product feed is consumed, and ship the oil to centralized refining plants. This would require a small-scale extraction unit using a stabilized non-inflammable solvent and equipped to produce the meal in an edible condition.

iii. *Grain-Alcohol Production in Small-Scale Plants, Community Operated*

The current extensive use of wheat for the manufacture of industrial ethyl alcohol has created new interest in the efficiency of the process—higher alcohol yields and more by-product feed is a major problem. Intensive research has already effected great improvements in plant design and operation; improved fermentation processes have been evolved; new methods for extracting and recovering the gluten prior to fermentation are being investigated and improved methods of drying the by-product feed are now in use. These technological

advances may make it possible to produce alcohol from grain in competition with molasses derived alcohol, especially if the distilleries are located where the by-product can be utilized to the best advantage as live-stock feed.

Our future needs for industrial alcohol will undoubtedly increase with the expansion of chemical industry. Careful consideration should be given to the proposals originating in the research laboratories of Joseph E. Seagram and Sons Inc., Louisville, Ky., for utilizing farm products in the production of ethyl alcohol for farm motor-fuel.

iv. *Whey-drying at Cheese Factories and Small Casein Plants*

Special attention should be given to the production of lactic acid which is a remarkable chemical intermediate and can be transformed into a number of valuable organic chemicals and resins. Whey is the most economical source of lactic acid but transportation difficulties and the problems of providing for the year-round operation of an industrial plant can only be solved by drying the whey in economical small-scale drying units.

v. *Dehydrated and Frozen Foods as a Permanent Industry after the War*

The rapid advances in taking the water out of foods may be leading to a new era in the history of food. Dehydrated foods are certain to hold their importance at least during the reconstruction years. Dehydration offers a practical means of utilizing local and seasonal peaks of production; it is the most effective way to conserve food supplies and move them cheaply and easily wherever they are needed; and through the new developments in pre-cooking, it means time saved in the kitchen. Small farm dehydrators of a size which represents a good compromise between cost of production and usable capacity, should be designed to enable the farmer to dry his own crop.

5. *General Research Program*

Many other suggestions for inclusion in a research program will be found in the National Chemurgic Committee's report. Examples of new developments which may increase in importance with a long war and may lead to the establishment of new industries are the cultivation and processing of the dandelion and milkweed as sources of rubber latex and other industrial materials. The following types of research are also proposed:—

i. *Wheat Starch*

Separation and purification of wheat starch and preparation of modified starches and starch derivatives for use in particular industries. Adhesives from wheat starch and dextrin. Manufacture of glucose and maltose. Fermentation of wheat starch to produce ethyl alcohol, acetone, glycerol, butylene glycols, etc. Utilization of the by-products of starch manufacture.

ii. *Vegetable Proteins*

Separation and purification of wheat gluten. Effect of storage of gluten on quality of gluten breads. Manufacture of mono-sodium glutamate from gluten. Wheat-germ proteins in new foods. New uses for gluten and the proteins of linseed, soybean and sunflower-seed cake, including plastics and manufacture and uses of amino acids.

iii. *Vegetable Oils*

Extraction and refining of linseed, sunflower seed, soybean, rape seed and wheat oils. New and extended industrial and food uses for these oils. Preparation of their fatty acid components and derivatives with particular regard to utility of the products.

iv. *Agricultural Residues*

Production of fuels, other than by fermentation, e.g. generating producer gas, briquetting, etc. Manufacture of useful articles, building materials, fillers, etc., with as little chemical processing as possible. Manufacture of paper, alpha-cellulose, cellulose plastics, lignin and associated plastics, solvents and organic chemicals.

Research Service for Eastern Canada.—A comparable research service on problems peculiar to agriculture in Central and Eastern Canada could be provided by the Chemistry Division of the Central Experimental Farm and the Division of Applied Biology of the National Research Council. The new research institute would serve the Province of British Columbia in the fields of research indicated above; utilization problems on horticultural products are already being dealt with by the Fruit Products Laboratory at Summerland, B.C.

It is generally believed that in the immediate post-war period we must aim at a maximum production of food for a starving Europe and Asia. The proposals put forward here are not necessarily inimical to that objective. Most of the projects provide for the utilization of farm wastes and low-grade food products which will not be in competition in the food market in the post-war period. Since animal products are likely to be in greatest demand the production of grain alcohol could actually contribute to expanding live-stock production, since the by-product is a more valuable feed than the original grain.

Whatever the immediate post-war situation may turn out to be it is certain that the problem of finding markets will increase in importance as the years go by. Our agricultural surpluses will have to find domestic markets to an even greater extent.

Since we have a relatively small consuming population, industrial enterprises such as are envisioned must be built up largely on the export of new commodities which have been discovered in our own laboratories and are protected by patents. A perusal of the long list of patents issued each year serves to illustrate the dominant position which American enterprise has in Canadian food, pharmaceutical and general chemical industries. Research of the nature outlined in this report is particularly vital to Canadian development. It is important to remember that the facilities necessary to develop this include resources in trained personnel. Men with the appropriate scientific training will be needed for these aspects of post-war reconstruction in Canada if this is to be imaginative and far-sighted, and plans for their utilization in governmental agencies concerned with agricultural products research should be worked out in advance.

V. RESEARCH, EDUCATIONAL AND EXTENSION SERVICES

1. *Farm Management*

At a meeting of the Subcommittee with representatives of provincial Departments and Colleges of Agriculture a good deal of emphasis was placed on improved farm management as a prerequisite to good farming and increased income in the post-war period. It was observed that knowledge in this field was deficient when compared with the understanding of farming techniques and practices. Subsequently several college heads submitted memoranda emphasizing the importance of this matter and suggesting means of improvement.

Members of this committee agree that there is a very great need for improvement in this direction. They are aware, however, that in this as in other fields, the provision of a great deal of information and the establishment of a body of principles is necessary before much progress can be expected. The science of farm management, which can come only from an extensive amount of

economic research, must precede and become firmly established before its application can proceed beyond the most elementary stages. At the present time farm management research and education has hardly proceeded beyond the introductory stage in this country. The Economics Division, Dominion Department of Agriculture and several of the principal colleges of agriculture engage in a limited amount of such research and education, but compared with progress in many other countries Canada is quite backward.

2. *Agricultural Economics*

Farm management, however, is only a division of a much broader field of study—that of agricultural economics. In its broadest conception this field covers land use and classification, land tenure, farm appraisal, farm costs, rural credit, marketing, transportation, and consumer demand. Closely related and frequently considered a part of the field of rural economics, is the subject of rural sociology, or the science dealing with farm living conditions, community life, rural institutions and local government.

The development of reliable information and of a body of principles dealing with farm management, is dependent upon research in other fields of production economics, and in the divisions of transportation and marketing. Moreover, knowledge that leads to increased income will in turn be incomplete if it is not accompanied by information that will contribute to a better understanding of rural social problems and of rural-urban relationships in our complicated society.

Agricultural Statistics.—In considering this matter the Subcommittee recognizes that economic research is based upon statistical data. Much of the statistical information used by the economist is obtained by means of economic surveys but in a good deal of his work, particularly in the broader fields of agricultural policies, the economist depends upon the information supplied by the Census or by separate statistical surveys such as are conducted annually by the Dominion Bureau of Statistics.

In its study of the rural situation, and in particular the relation of agriculture to the national and international economy of the post-war era, the Subcommittee is convinced that much greater attention must be given to economic factors than has ever been the case in the past. It does not consider that we have solved the problems of production and that all we will have to deal with in the future will be distribution; on the contrary, it recognizes many unsolved problems and the need for much more research in the production field. It considers, however, that economic research should be made to contribute to the solution of production problems. And it is seized with the need for a greater amount of research in the economics of distribution and in the relationship of agriculture to the economic life of the nation.

The Subcommittee accordingly recommends that the Dominion Government increase its appropriations and enlarge its services on behalf of agriculture, both as regards economic research conducted by the Department of Agriculture, and in the field of statistical services provided by the Dominion Bureau of Statistics. The Subcommittee also suggests that consideration be given by the Dominion to the desirability of providing financial assistance to universities and colleges of agriculture for the expansion of research, teaching and extension work in rural economics, including rural sociology.

3. *The Natural Sciences*

While more progress, generally speaking, has been made in research in the natural sciences than in the social sciences, there are still many divisions of the former requiring further expansion. This is particularly true in connection with soils and in respect of some of the newer branches of science.

In this connection, and this applies also to research in the field of economics, much greater effort may be necessary in the future to maintain our position in international markets than has been the case in the past. This committee has recommended a program involving the freeing of world markets and the expansion of production to meet the demands that such a program will bring about. It recognizes however, that those seeking a place in this new world market will encounter very keen competition. The intensity of this competition, compared with that of other years, will be increased by reason of the adoption of the newer techniques, the most up-to-date equipment and the latest in scientific knowledge, by many countries which until recently had been content to carry on with less progressive methods.

If Canadian farmers are to meet this competition they must be extremely efficient, and anything that will contribute to that efficiency should not be overlooked. In the past science has contributed greatly to agricultural progress and there is every reason to believe that it will do so in the future.

The Subcommittee is of the opinion, therefore, that money spent for experimental and scientific research will be money well spent—that it will return dividends on both the individual and national account. Accordingly, it recommends that the appropriations for research and experimental work on behalf of agriculture be increased.

4. Vocational Training

It is recognized that research must precede and become the basis of educational work. But it is equally true that research must be applied to the problems of the day if it is to yield results. In agriculture, research results must be placed at the disposal of farmers if they are to be reflected in improved farm operations.

Agriculture, by reason of rapidly changing conditions and a continuous trend to more diversified forms of production, is steadily becoming a more complex form of industrial activity. Reference has already been made to the importance of management on the farm. The successful farmer must have an understanding of sound business practices. He must also have a knowledge of soils, of insect and plant disease control, breeding and feeding practices, care and treatment of disease in animals. He must be informed on market conditions and must develop sales' capacity. He must possess some skill in the techniques such as carpentry and mechanics. In general he must be able to combine knowledge and skill in such a manner as to be able to give sound direction to all his farm operations.

The Subcommittee believes that the agriculture of tomorrow will demand that new emphasis be placed on vocational training designed to fit men for the operation of a farm. Vocational training must assume a greater position in our whole agricultural program. Much is now being done by way of instruction given through the medium of the farm press, farm bulletins, radio, junior farm clubs, farm meetings and demonstrators, short courses, high schools and agricultural schools; but these must be supplemented by more intimate and complete high school and university training in the art of farm management and in the use of scientific information.

The provisions of the Vocational Training Co-ordination Act have been reviewed and it is recognized that this legislation provides a substantial measure of training for:

- (a) Men and women demobilized from the Armed Forces.
- (b) Workers leaving war industries.
- (c) Young people in rural as well as urban areas.

The training given under this Act merits commendation and emphasizes the need for extending facilities, fully correlated with the work being done in the provinces and worked out so as to distribute the cost imposed on a basis fair to each of the governments.

The Veterans' Land Act makes special provisions for training returned men desiring to engage in agriculture. These, we feel, meet the present needs in a reasonable measure for those demobilized from the Active Forces.

But if farming is to take its proper place in the national economy, farm training must not only be better but it must be more widely utilized. At present, perhaps not more than five per cent of the farmers have had vocational training. With changing farm conditions after the war, this should be increased to include at least the major number of our farm operators. To provide this training will require an increase in the number of vocational schools. Without now attempting to define their organization, location or curriculum, it may be desirable to suggest that the basic problems of financing will demand co-operative action between the Dominion and Provincial Governments, the student and interested organizations. The governments might share capital costs on some basis to be agreed upon, the cost of operation to be borne by both governments supported by some charge on the student, but the student's tuition fees should be such that the average farmer could afford and be anxious to have his sons and daughters take the course. Interested institutions such as farm organizations, grain companies, packing houses, service clubs and kindred organizations should be encouraged to offer scholarships to assist capable, needy students.

5. District Representatives

The work now being done by district representatives, working under the provincial departments or colleges of agriculture, should be so extended as to provide these services to all our farmers. Experience in all provinces demonstrates very definitely the value of these services. They bring to, and interpret to, our farm people the most reliable and scientific information and effective type of farming practices. Undoubtedly, with this type of direction and supervision, sympathetically given, thousands of our farm people can be assisted in more successful and efficient operation of their farms. But the most effective results can only be attained if the efforts of the Dominion Department of Agriculture and the various provincial departments and colleges of agriculture be integrated and co-ordinated in the fullest possible manner.

In the United States there is a well-defined federal policy in respect to co-operative extension services, and in this country there are a considerable number of men who are engaged in agricultural work both in the Dominion Department of Agriculture and in provincial departments of agriculture, who feel that an effective extension service is only possible through a greater participation in such work by the Dominion Government.

The manner in which this can best be achieved will require careful consideration by both Dominion and provincial officials. It is recognized that extension work, as a part of the broad field of education, is primarily a provincial responsibility. As such it should remain. But it may be possible to provide a national extension service that would aid provincial men without usurping their accepted responsibility and without running foul of the British North America Act. Such a service might perform the following functions:—

- (a) Interpret Dominion policies and programs to provincial officials.
- (b) Act as liaison between the Dominion research worker and the provincial extension worker in getting the results of research to farmers.
- (c) Assist the provinces in the working out of regional programs which involve two or more provinces.
- (d) Assist in co-ordinating Dominion and provincial activities.

The Subcommittee accordingly recommends that the Dominion Government explore the possibilities of developing an extension service along the lines indicated, and that it invite discussion on the matter by provincial authorities. Should the results of such investigation and exchange of views indicate that a proposal such as that suggested would be acceptable, action to bring such a service into being should then be taken.

VI. LAND USE AND CONSERVATION

No single phase of the production problems affecting agriculture deserves more attention than does that of the intelligent use of the land. Because of the widely varying character of our soil structure, soil covering, mineral content, surface contours, annual precipitation and wind velocity, it is not easy to state principles that can be applied with equal success across Canada. Conservation of our agricultural resources and the fullest use of our land become increasingly important as the years go by and deterioration continues through wrong cultural practices and soil exploitation. It is perhaps not too much to say that many of our present problems have developed out of the fact that during the years of high immigration and rapid expansion we did not have a carefully thought-out land settlement program based on an adequate knowledge of the productive capacity of the soil brought into production.

It would seem necessary, therefore, in planning for post-war agricultural reconstruction, that the first step taken would be a complete classification of all agricultural lands in every province, based on soil and economic surveys. The Dominion Government and the Western Provinces particularly, have such surveys well under way, while some work has been done in all provinces. But the completion of this work is critically needful. With our land classified on the basis of facts revealed by such soil and economic surveys, intelligent plans and production programs may then proceed. Sub-marginal lands should be restricted from settlement, and only used for such purposes as are consistent with their productive capacities.

Before leaving the matter of surveys, it might be well to note that if the full value of such effort is to be attained and lands properly classified, soil scientists, forestry officers, water development engineers, economists, and others must be called into service, and their activities should therefore be well organized and effectively co-ordinated.

The Subcommittee has carefully reviewed the work being carried on by the Experimental Farm System and has noted that—

(a) There are 30 experimental stations, 60 sub-stations and 185 illustration stations now operated by the Experimental Farm System.

(b) The work is fully co-ordinated with that being done by provincial authorities.

(c) Joint plant-breeders' committees insure co-ordination and co-operation in the promoting of plans and exchange of information.

(d) Exceedingly valuable work is being done through the administration of the Prairie Farm Rehabilitation Act and the co-ordination of the work of the P.F.R.A. with that of the Department of Agriculture.

The Subcommittee draws attention to its recommendations concerning research and experimental work appearing in section V and urges that in the expansion of such services due consideration be given to the need in the field of land utilization.

The Subcommittee recommends that legislation similar to the Prairie Farm Rehabilitation Act with provisions applicable to agriculture throughout Canada, be enacted; also that the administration of such legislation be co-ordinated with the administration of other legislation dealing with natural resources.

VII. FARM CREDIT

The United Nations Conference on Food and Agriculture recognized the importance and necessity of adequate credit facilities in any soundly conceived program of agricultural improvement and development when it passed the following resolution:—

Whereas:

1. Capital development and adequate credit facilities are necessary if agricultural production is to be restored, increased and intensified;
2. Agricultural credit in some countries has frequently been obtainable only at rates which the farmer could not afford to pay;
3. The agricultural communities in many countries have been unable to obtain information on the organization and development of agricultural credit systems in other countries;
4. In some countries full agricultural development has been or may be obstructed by difficulties in providing adequate capital:

The United Nations Conference on Food and Agriculture recommends:

1. That every endeavour be made to ensure an adequate supply of credit to agriculture;
2. That to this end full use be made of all types of suitable private, co-operative, and public credit institutions;
3. That the rate of interest be as low as possible and the conditions regarding initial cost, redemption, etc., be as favourable as possible for the borrowers, particularly with a view to helping the small farmer;
4. That, in view of the importance of agricultural credit, its requirements be duly recognized by international action taken as a result of this Conference.

Soundly conceived credit institutions are essential and necessary for post-war agriculture in Canada for the following reasons:—

- i. To facilitate the acquisition of farm lands and farm machinery by new owners and operators, including farmers' sons.
- ii. To assist in reducing the cost of production.
- iii. To tide over those intervals during which the farmers' product is being prepared for market.
- iv. To provide for much needed repairs and replacement of machinery and farm equipment.
- v. To encourage the building of better homes and farm buildings where needed.
- vi. To refund existing loans and to contribute to the solution of the farm debt problem.

In any discussion of farm credit a distinction must be observed between long-term credit and intermediate or short-term credit.

1. *Long-Term Credit.*

Long-term credit is usually required for capital improvement and replacement and for refunding or refinancing existing debts.

Historically, prior to 1927 the commonly accepted form of mortgage loan in Canada was a five-year mortgage carrying rates of interest varying from five per cent in Eastern Canada to eight per cent in Western Canada, although the accepted rate in Western Canada is currently six per cent. In Western Canada such loans have usually been provided by lending corporations. Apparently, however, corporate loans have not been general in Eastern Canada. There to a very large extent such loans have been provided by private investors or provincial government agencies.

The period beginning 1930 has witnessed a decline of private and corporate investment in mortgage loans throughout Canada. This decline is partly due, of course, to conditions which prevailed in the farming industry in the decade commencing 1930. The entry of the Canadian Farm Loan Board into the farm loan field contributed to this decline, while a still further reason is the growing belief and conviction that private mortgage loans, as they have so far existed in Canada, are not suited or adapted to our Canadian farm economy. This is true for two reasons:—

i. That the term of five years is too short. A survey of mortgage loans in any part of Canada will show that only a very small percentage are actually paid off in five years or even ten years. The majority of farm mortgages still outstanding in Western Canada were originally placed from 10 to 15 years ago.

ii. The rate of interest has been too high. A mortgage loan by its very nature is based on a security of a comparatively small plant subject to many hazards, particularly the hazard of climatic conditions. While it is true that the unusual hazards surrounding the industry might justify a higher rate of interest than is common to other industries not susceptible to those hazards, still the rate must be such that the industry can carry it and it is probably true that a survey of farm income over long periods will show that the industry cannot carry the rates which prevailed, particularly in Western Canada, until very recent years. While it would be difficult to say just what rate the industry can carry, it is doubtful if, with the average levels of prices which have so far prevailed for farm products, a rate of more than five per cent can be successfully carried by the average farm in Canada to-day.

The essential function of the farm industry is the production of food commodities for the people of Canada as well as of other countries and in many parts these commodities are produced under hazardous climatic conditions. The very nature of the industry justifies special measures to ensure necessary credit at lower rates of interest than would prevail if the ordinary rules of supply and demand dictate the rate.

CANADIAN FARM LOAN BOARD

In Canada we have already experienced state loans for farmers in the establishment in 1927 of the Canadian Farm Loan Board. Practically, its activities date from 1931. Up to the end of 1934 it operated to a moderate extent only. In 1931 loans were approved to the extent of \$3,212,000 and in the following year to that of \$2,000,000. In the three succeeding years, however, the loans were comparatively small, being only \$490,000 in 1934. In 1935, both the Act and the administrative machinery were considerably enlarged. It is significant that in the same year the Farmers' Creditors' Arrangement Act was also passed and it was probably the intention of the Government of that day that the two Acts should work together. Under the Farmers' Creditors' Arrangement Act farm debts would be adjusted, and under the Canadian Farm Loan Act money could be provided to pay off the debts as adjusted. The rate of interest was reduced and provision was made for loans up to 50 per cent of the value of the land with a maximum of \$5,000 for any one loan.

The effect of this change was immediately apparent, since in the following year, 1936, loans were approved for approximately \$8,900,000 and in 1937 for over \$9,000,000. Table 1 (page 189) Canada Year Book 1942 shows the volume of loans made each year by the Board from 1931 to 1941, while Table 2 (page 190) shows the distribution by provinces of loans made in 1940 and 1941. This latter table shows that the Board has operated substantially in every Province. In the Province of Quebec the Provincial Government absorbs the interest rate over three per cent, thereby providing loans for its farmers at a rate of three per cent.

An examination of the operations of the Canadian Farm Loan Board shows that on the whole it has been fairly successful. It has operated without serious loss and it is probably true that the majority of the losses sustained have been in areas which have suffered seriously from drought or other adverse conditions. The Board has demonstrated that it is possible to operate a scheme of state loans for agriculture without being handicapped by political influence and has further demonstrated that such a scheme can be operated in Canada without serious loss to the taxpayer.

Notwithstanding these facts, the scheme has not been the factor in the farm loan field that might reasonably have been expected of it. Apart from Government policy this is probably due to two causes:—

i. Its administration has been exceedingly conservative. While the Act provides that loans may be made up to 50 per cent of the land valuation, the Board has rarely loaned up to that margin. In some provinces the Board has fixed a low maximum per quarter section beyond which it would not loan under any circumstances.

ii. The Board has required a very large degree of financial solvency on the part of the borrowers. It has rarely made a loan unless the proceeds thereof were sufficient to pay off all outstanding liabilities of the debtor. Many farmers were therefore unable to obtain loans and the function of the Act as an adjunct to the Farmers' Creditors' Arrangement Act largely failed.

Notwithstanding this criticism, the Board's operations have exercised a good influence, not only in the credit it has provided but also in reducing interest rates, by reason of the element of competition, which it introduced into the loan field.

The Subcommittee directs the attention of the Board to the desirability of using for supervision purposes throughout Canada the personnel of agricultural agents which we hope will be generally appointed after the war. By using the services of such agents or other similarly qualified persons it may be possible to substantially reduce supervision costs of loans to borrowers and make more effective the measure of security offered. The Subcommittee also suggests that the practice of the Board could be more liberal both as to volume and valuation basis of loans and in the degree of solvency required of borrowers.

It is further suggested that consideration be given to the interest rate in the immediate post-war years. We are experiencing a period of low-cost money which will probably continue for some years after the war. The lower the rate of interest, the higher the degree of safety of the investment. It is suggested that as a post-war measure, a rate of four or four and one-half per cent could be put into effect without loss to the Government and the operations of the Board would be a much greater factor in contributing to the security and stabilization of the farming industry, and in forcing interest rates generally to the lower level.

CENTRAL MORTGAGE BANK

As stated above, provision for farm credit is necessary to assist in refunding farm mortgages. Notwithstanding the increased farm income of the war years, a very serious problem still exists both in Eastern and Western Canada with respect to refinancing existing farm loans, the majority of which are long overdue and a substantial percentage of which are still badly in arrears as a result of ten years of depression during the thirties.

In 1939 the Parliament of Canada enacted the Central Mortgage Bank Act. The scheme of that Act provided for membership by lending institutions on the basis that each member would enter into a membership agreement which would

provide for the adjustment of any mortgage held by it to a maximum of 80 per cent of the value of the security and with a term of twenty years for payment and with an interest rate of five per cent. Any losses sustained by members were to be absorbed to the extent of 50 per cent by the Central Bank.

For various reasons, but mainly no doubt because of the outbreak of war, the Act never became operative. There is still a widespread feeling, however, that the Act was based on sound general principles and that such an institution could perform a real service in refunding the still very large amount of farm loans outstanding against Canadian farms. In addition to refunding outstanding farm loans, such an institution might supplement the work of the Farm Loan Board by making use of the credit facilities of loaning organizations to provide a substantial part of the funds for farm loans in the future.

The Subcommittee recommends that the Government give early consideration to the establishment of a Central Mortgage Bank, either under the existing Act or a revised act. In doing so it directs attention to the comment on supervision made above.

Private and corporate lending should still be encouraged and it is suggested that the various provincial governments might well consider to what extent restrictive legislation passed in the period commencing in 1930, might be removed as an incentive to lending institutions again entering the field, particularly under an agreement with the respective governments that the rate of interest should not exceed a certain definite and prescribed rate.

2. *Intermediate or Short-Term Credit*

Intermediate or short-term loans are those for a term from two or three months to one or two years. Such intermediate or short-term credit is required for ordinary operative purposes as well as for such special objectives as the acquisition of live stock, for feeding or similar purposes. The need for such credit is accepted in all countries as part of an agricultural program.

This need was particularly demonstrated in Western Canada in 1941 and 1942 when the quota system of wheat delivery came into effect. The farmer sows his seed in the spring and reaps his harvest several months afterwards in the fall. Prior to the years before the war, he could reasonably expect to deliver his grain and receive the price therefor within a short time after threshing. As stocks of grain accumulated and car shortage appeared, delivery quotas were established commencing with a quota of three bushels per acre and in many cases the farmer was unable to deliver his full crop before the following month of July.

There is still no adequate provision for short-term or intermediate credit in Canada. This Committee was impressed with the submissions made to it by Mr. Cyrille Vaillancourt, Managing Director of La Federation des Caisses Populaires Desjardins, which operates in the Province of Quebec, and by Professor A. B. McDonald regarding the credit unions operating in other provinces. These institutions are growing in size and in number. We are led to believe that in the Province of Quebec the Caisses Populaires take care of farm credit requirements fairly well. The advocates of credit unions believe that these organizations will ultimately take care of short-term credit requirements in other provinces. This will take time, however, and in the interval some further provision for this type of credit should be provided.

In some parts of Canada the Canadian banks appear to be unable to provide such credit. According to the Canada Year Book 1942 (page 824), the number of branches of chartered banks in Canada dropped from 4,676 in 1920 to 3,300 in 1941; and there has been a considerable decrease in the number of branches since that year. It is significant that the decline has not been as marked in the

Eastern Provinces as in the Western. In Ontario, for example, the number declined from 1,586 in 1920 to 1,207 in 1941. In Alberta, on the other hand with a much larger farm area, the number declined from 424 in 1920 to 170 in 1941. It is obvious that the agricultural area of the latter Province cannot be adequately served by that number of branches unless some provision is made for sub-agencies.

This Subcommittee has not felt itself competent to suggest in detail the manner in which this form of credit should be provided. Canada is a country of moderate wealth, at least so far as the rural areas are concerned. It is sparsely settled and farming is carried on over an immense area. Schemes that are in effect in other countries, such as the United States of America, might not fit into our farm economy. The Subcommittee, therefore, confines itself to the following two recommendations:—

(a) That the Dominion Government join with the Provincial Governments in giving every encouragement and support to such co-operative efforts as the *Caisses Populaires* in Quebec and the credit unions in other Provinces.

(b) That the Dominion Government make a careful survey of the schemes for providing short-term and intermediate credit now in force in other countries, with a view to making provision for adequate credit at low rates of interest to deserving farmers, using as far as possible existing facilities, including the chartered banks of Canada.

VIII. FARM LABOUR

The question of farm labour may continue even after the war ends to be a very difficult problem. Reference has already been made to the low income and wages earned on the farm before the war both by the farm family and by temporary additional help. Conceivably, the farmer's labour problem may be increased by the extent to which reconstruction policies and programs succeed in bringing about and maintaining full employment at reasonable wage levels.

It is difficult at all times for the farmer to compete on an active labour market. The hours of work per day are longer, the rate of cash wages usually are lower, no compensation is allowed for injury, and the opportunities for recreation or entertainment are much more restricted. It may be expected that if the present labour conditions and wage levels in industrial enterprises are to prevail in the future, a very acute farm labour problem will have to be faced.

Already approximately 450,000 men and women have left the farms of Canada for service in the armed forces or in war industries. Many of these are becoming accustomed to a much higher cash income, shorter hours of work, and improved social conditions, and are therefore likely to be reluctant to go back to farm employment when the war is over, especially if employment elsewhere is to be found. Generally speaking, the farmer has paid a level of wages as high as is reasonably consistent with his own farm income and even then is often quite unable to compete on the labour market.

Attention must be given to this very important farm problem with these factors in mind. There is a high degree of correlation between farm income and the wages paid hired help. Given adequate income farmers can and will pay reasonable wages and provide better social conditions for hired workers. The committee believes that the application of the policies suggested in this report will do much to bring about this result. In one respect however, it suggests direct action.

As part of a post-war housing scheme, consideration should be given to assisting the farmer to provide a separate home for his hired help. This might be done by way of a loan repayable over a number of years and at a low rate of interest. The farmer could then be encouraged to supplement the cash wages paid by giving his employee the free use of a cow, a few hens and a small plot of land for a garden. This would encourage married couples with small families to make their homes on farms and would tend to stabilize farm labour. Immigrants coming to Canada might get their start in this way, learn the customs and practices of the country and so equip themselves as to make it possible ultimately for them to become permanently established.

IX. TRANSPORTATION AND MARKETING

1. *Transportation*

Because of the geography of Canada and the fact that trade moves largely east and west and much of our agricultural produce is produced thousands of miles from consuming markets, transportation costs and services are very important factors in Canadian farm economy. This is particularly true with respect to those commodities which move into export markets. Similarly the transportation costs on all commodities which the farmer must buy become a charge on production. Consequently the problems of adequate transportation services and reasonable transportation costs must always be the subject of careful thought and study by legislative bodies in Canada.

Railway and Motor-truck Regulation.—For many years the Board of Transport Commissioners for Canada has been given and has exercised jurisdiction over all matters relating to railway transportation. This is made possible by the fact that jurisdiction over railways has been given to the Dominion Government by the British North America Act.

Prior to the outbreak of war transportation by truck had increased very rapidly in all parts of Canada. Jurisdiction over such traffic rests largely with the Provinces. We believe that the various Provinces have been fully aware of this development and, so far as the authority of each extends, have taken necessary steps to regulate rates and tariffs and to license, regulate and control operators within the Province. With the steady improvement of inter-provincial and trans-Canada highways, and the increase in size and operating efficiency of trucks, it may be expected that transportation by truck will play an ever increasing part in the general movement of commodities from the farms. In the course of its work the Subcommittee received many indications that adequate supervision, control and regulation of inter-provincial truck transportation services and rates had not yet been attained. The Subcommittee had not the time, and it was probably not within its term of reference, to make any extended examination of these suggestions. Having regard to the increasing importance of this form of transportation to Canadian farm economy, the Subcommittee feels that as soon as possible conferences should be resumed between the proper representatives of the Dominion Government and the Provinces to provide some effective and central authority over all such inter-provincial traffic and services.

Market Roads.—Adequate market roads are essential to a sound and prosperous agricultural industry. Unfortunately in all too many parts of Canada, even in the older Provinces, market roads are still of such low standard that in certain seasons of the year farmers can only reach their local markets or shipping points with the utmost difficulty and with undue cost both in time and money.

Substantial progress has been made throughout Canada in the development of main highways and arteries. This progress was greatly facilitated by the

policy carried out for a number of years by the Dominion Government in paying subventions to the provinces with respect to main highways which had been brought to certain approved standards of construction.

The Subcommittee recommends that serious consideration be given to a similar policy of subventions to be paid by the Dominion Government to the Provincial Governments as part of a post-war program, to encourage the construction of purely market roads (as these may be properly defined), which have been brought to a certain minimum standard of construction.

2. Marketing Legislation

The Subcommittee is in agreement that never again in the interests of Canada can the price of farm products be permitted to fall to the disastrous levels of the thirties. Even with active export markets available there may be certain commodities in various sections of Canada in surplus production, resulting in prices so low as not to permit profit to the producers.

The results of ten years' experience with marketing such products in British Columbia and Ontario under special marketing legislation would seem to prove the value of the legislation under certain conditions. Commodity organizations are thus enabled to regularize marketing practices and impose levies on their product sufficient to finance such marketing operations, and to give general direction to marketing activities of all their affiliated membership producers.

Should Canada experience a return of the conditions that made market regulation necessary, the further application of such measures may be necessary. The Subcommittee feels, therefore, that the whole matter should be carefully studied by appropriate Government officials with the view of meeting the need for national legislation.

3. Co-operation

The important contribution of co-operative associations and organizations in the field of agricultural production and distribution was recognized by the United Nations Conference on Food and Agriculture. The following resolution was passed by that Conference:—

Whereas:

1. The co-operative movement has been of very great importance in many countries, both to urban and rural populations, especially in agricultural districts where farming is based on small units and in urban areas of low income families;

2. The proper functioning of co-operative societies may facilitate adjustments of agricultural production and distribution, as members have confidence in the recommendations and guidance of their own co-operative organizations, which they know operate in the interest of their members and of society in general;

3. The democratic control and education programs, which are features of the co-operative movement, can play a vital part in the training of good democratic citizens, and assist in inducing a sound conception of economic matters;

The United Nations Conference on Food and Agriculture recommends:

1. That, in order to make it possible for people to help themselves in lowering costs of production and costs of distribution and marketing:—

(a) All countries study the possibilities of the further establishment of producer and consumer co-operative societies in order to render necessary production, marketing, purchasing, finance, and other services;

(b) Each nation examine its laws, regulations, and institutions to determine if legal or institutional obstacles to co-operative development exist, in order to make desirable adjustments;

(c) Full information as to the present development of co-operatives in different countries be made available through the permanent organization recommended in Resolution II.

In Canada, as elsewhere, the co-operative movement in its relation to agriculture has developed very rapidly in the past twenty years. Many large and successful organizations have become firmly established both in the field of marketing and in the purchase and supply of consumers' goods. These organizations are meeting fully the purposes set out in the preamble of the resolution above quoted, in giving guidance and leadership to producers, in the training of democratic citizens and in inducing a sound conception of economic matters. Some provinces have recognized the worth of this movement by maintaining departments for the encouragement and assistance of co-operative organizations.

This committee endorses fully the views expressed in the resolution passed at the Food Conference and expresses the hope that all governments in Canada will use all reasonable means to encourage and assist the organization and development of co-operative activities in relation to agriculture.

Co-operative Legislation.—An examination of the laws of the Dominion and of the provinces of Canada reveal that they are not adequate in making provision for the incorporation and organization of such associations. Both the Dominion and the provinces have jurisdiction over the incorporation of companies. The Dominion Companies Act is lacking in provision for the incorporation of co-operative trading concerns, particularly in making provision for those details now generally associated with co-operative organization, such as membership instead of a share capital basis, organization of membership into locals or districts with delegate representation or voting by mail, the distribution of surplus earnings among customers as well as members and the retirement of capital investment on the so-called revolving-door principle. In most of the provinces, legislation has been passed especially directed to the incorporation of co-operatives. Some of this legislation, however, was passed in the early days of co-operative enterprise and is inadequate for the need of the larger organizations that have developed in many provinces, as well as for presently accepted conceptions of co-operative organization. This has led in some instances to resort to incorporation by private act.

The Subcommittee therefore recommends that as soon as possible the Dominion should embody in the Dominion Companies Act a part having special reference to co-operatives and in doing so should confer with the provinces with a view to obtaining uniformity in the respective fields.

4. Terminal Market Facilities

Canadian farm produce of all kinds for domestic consumption is marketed to a large extent through such terminal markets as those at Halifax, Montreal, Toronto, Winnipeg and Vancouver.

Except for one new building at Montreal these market facilities were all laid out and built before the days of truck transportation, and they are now antiquated, unsanitary and inadequate, causing heavy additional handling charges and serious deterioration of the products. These losses go directly back to the Canadian producer and place him in an unnecessarily disadvantageous position.

A careful review of the terminal market situation is presented in a recent report "Wholesale Markets for Fruits and Vegetables in Canadian Cities" by Dr. W. C. Hopper.

Modern, efficient and well-organized terminal market facilities for all farm produce has become an urgent need and the Subcommittee recommends that the provision of such facilities be recognized as deserving of priority position in a public works reconstruction program.

X. LAND SETTLEMENT

Because of legislation already enacted providing for placing returned men on the land, the Subcommittee has confined itself to the more general aspects of land settlement. An extended report on land settlement opportunities requested by the Subcommittee, is now in process of compilation by Dr. Burton Hurd of McMaster University and will be available shortly.

Three simple statements of fact should be noted here:—

1. Generally speaking, the area of land available for homesteading is now very limited.
2. The period of great railway construction in Canada has passed and opportunities for supplementary employment are not likely to be available.
3. The settler therefore is likely to be almost wholly dependent for his living on the returns from the land he purposes to develop.

These facts make it very necessary that the productive capacity of the land to be occupied should be properly appraised both as to type of production to be followed and reasonable returns to be expected.

With the foregoing facts in mind, the Subcommittee suggests that the following principles and points be observed or used as guides in land settlement policy:—

1. All land settlement should be preceded by a complete soil survey and classification of the land.
2. All sub-marginal lands should be eliminated from settlement and set aside for reforestation or community pastures, etc.
3. Consideration should first be given to the possibilities of increasing the density of the population in desirable areas rather than to the extension of new settlements in less desirable districts lacking municipal, educational and social services.
4. Consideration should be given to assistance to farmers' sons who desire to take up land but are unable without assistance to establish themselves on a farm and who might otherwise drift into urban communities.
5. The determination of plans for replacements on farms available for sale or rent, due to the retirement of previous occupants through illness, infirmity, old age, lack of children to carry on and inability to secure help, etc.
6. The development of carefully thought-out plans to meet any situation that may arise after the war due to—
 - (a) The extent to which the British Government may be anxious to re-establish people of the United Kingdom in the Dominions and will be prepared and able to finance them.
 - (b) Any desire that we may have to secure immigrants who will have sufficient capital of their own to enable them to get a satisfactory start in Canada, either in agriculture or industry.
 - (c) The need to meet any demand that may come from the peoples of certain countries of Europe to secure admission to Canada.

7. Further, the Subcommittee considers that if any policy is adopted for the admission of immigrants it should be broad enough to include persons other than those desiring to settle on land so that the present ratio of farm to urban population will not by that means be changed.

While this is by no means an all-inclusive statement, a land settlement plan based on the recognition of the above-mentioned principles and considerations would be one which would well serve the needs of Canada.

XI. FARM AMENITIES AND CULTURAL ACTIVITIES

1. Farm Housing and Farm Home Equipment

No single factor means so much to agriculture as the living and home conditions of its people. The very serious nature of the rural housing problems is vividly set forth in a bulletin issued by the Dominion Bureau of Statistics, entitled, "Housing Census of Canada, 1941—Preliminary Housing Bulletin, No. 31." Some statistics taken from that bulletin, and from Bulletin 48, Census of Agriculture, 1941, are presented below.

These statistics show that, comparing the longer settled eastern provinces with those of western Canada, farm homes and farm families in the former tend to be larger, the farm house better equipped and longer in possession of the occupant, and in the central provinces, at least, more valuable.

Farm Housing and Farm Home Equipment

	Canada	P.E.I.	N.S.	N.B.	Que.
Number occupied farms.....	733,689	12,234	32,963	31,881	154,629
Value of dwellings.....	\$1,096	\$1,057	\$953	\$861	\$1,019
Construction materials:	Per cent	Per cent	Per cent	Per cent	Per cent
Brick	8.7	0.6	0.6	0.7	4.7
Wood	83.3	98.6	99.0	97.7	89.8
Standards:					
Rooms per dwelling.....	5.7	7.3	7.2	6.8	6.2
Persons per dwelling.....	4.7	4.8	4.6	5.5	6.0
Heating:					
Stove	86.0	90.0	85.7	90.2	89.6
Furnace	12.0	7.0	12.9	9.0	8.6
Wood	78.8	88.1	90.2	98.3	96.1
Coal	19.1	10.9	8.7	1.0	2.5
Conveniences:					
Electric lighting	20.0	5.5	26.2	18.6	23.6
Bathing facilities	7.3	5.5	9.6	7.0	6.8
Flush toilet	8.0	5.7	8.7	8.0	16.5
Equipment:					
Radio	60.7	53.0	58.7	48.6	36.4
Refrigerator	22.2	22.5	26.5	18.8	26.6
Automobile	43.7	30.2	29.6	27.3	16.4
Telephone	29.2	17.1	25.8	16.0	15.8
Vacuum cleaner	4.3	1.2	4.6	2.6	1.2
	Ont.	Man.	Sask.	Alta.	B.C.
Number occupied farms.....	179,169	58,022	138,703	99,716	26,372
Value of dwellings.....	\$1,421	\$966	\$938	\$969	\$1,173
Construction materials:	Per cent	Per cent	Per cent	Per cent	Per cent
Brick	27.6	3.6	1.4	0.9	1.2
Wood	59.0	90.1	90.3	90.5	94.2
Standards:					
Rooms per dwelling.....	7.0	4.6	4.2	4.1	4.6
Persons per dwelling.....	4.2	4.7	4.4	4.3	3.8
Heating:					
Stove	81.0	81.4	87.7	87.7	90.8
Furnace	16.7	16.0	10.3	10.6	7.5
Wood	75.5	86.9	63.0	57.0	94.7
Coal	19.7	12.1	35.8	42.0	2.4
Conveniences:					
Electric lighting	37.3	7.3	4.8	5.5	36.0
Bathing facilities	10.7	3.2	3.7	4.3	23.5
Flush toilet	9.5	1.2	1.0	2.5	20.5
Equipment:					
Radio	66.3	66.8	71.5	72.9	69.3
Refrigerator	22.1	25.1	19.1	17.7	20.6
Automobile	69.6	48.6	45.0	46.7	35.4
Telephone	50.8	24.1	32.2	18.1	19.2
Vacuum cleaner	11.1	1.7	0.9	1.9	10.0

In 1941 Canadian farm houses were almost all single dwellings. Over 90 per cent of them were constructed of wood, except in Ontario where the proportion was 59 per cent. The average number of rooms in farm homes was greatest in the Maritimes, centering around seven, and least in the Prairie Provinces, where it averaged between four and five. The number of persons per dwelling ranged from 3·8 in British Columbia to 6 in Quebec.

The proportion of farm homes in need of external repair ranged from 28·6 per cent in Nova Scotia to 47·7 per cent in Saskatchewan, a very modest estimate.

The estimated value of homes averaged highest in Ontario at \$1,421, exceeded \$1,000 in Prince Edward Island, Quebec and British Columbia, and ranged down to \$938 in Saskatchewan and \$861 in New Brunswick.

Heating.—The number of farm homes heated by stoves runs from 81 per cent in Ontario to 90·8 per cent in British Columbia. The number heated by furnaces ranges from 7 per cent in Prince Edward Island to 16·7 per cent in Ontario. Wood is used as fuel in 57 per cent of the farm homes in Alberta and the percentage runs up to 98·3 in New Brunswick. Coal is used to heat 1 per cent of the homes in New Brunswick and 42 per cent of the homes in Alberta. Wood likewise was the principal cooking fuel, while gas or electricity was employed in 15 per cent of Quebec and 13 per cent of Ontario farm homes.

Conveniences.—Electric lighting, apart from either central or private plants, was installed in more than one-third of Ontario and British Columbia farm houses, but in 4·8 per cent only in Saskatchewan, 5·5 per cent in Prince Edward Island and Alberta, and 7·3 per cent in Manitoba.

Bathroom facilities are provided in 23·5 per cent of the farm homes in British Columbia, ranging down to 4·3 per cent in Alberta, 3·7 per cent in Saskatchewan, and 3·2 per cent in Manitoba. Similarly, flush toilets are to be found in 20·5 per cent of the farm homes in British Columbia, 2·5 per cent in Alberta, 1·2 per cent in Manitoba and 1 per cent in Saskatchewan.

Equipment.—The number of farm homes with radios ranged from a low of 36·4 per cent in Quebec to a high of 79·9 per cent in Alberta. Refrigerators were found in 26·5 per cent of the farm homes in Nova Scotia and in only 17·7 per cent of the farm homes in Alberta. Telephones were in use on 15·8 per cent of the farms in Quebec and on 50·8 per cent in Ontario. Ownership of automobiles ranged from 16·4 per cent on Quebec farms to 69·6 per cent on Ontario farms, while vacuum cleaners were found on 11·1 per cent of the farms in Ontario, 10 per cent in British Columbia, 1·2 per cent in Quebec and Prince Edward Island, 1·9 per cent in Alberta, 1·7 per cent in Manitoba, and 0·9 per cent in Saskatchewan.

Measures of Assistance.—The conditions disclosed in this analysis, indicating very substantial lack of home equipment in rural houses in contrast to the conveniences and comforts of city life, perhaps explain in some degree, at least, why so many of the younger rural people are drifting away from the farms, seeking a more comfortable and convenient style of living. They also suggest the need of placing in the forefront of reconstruction plans, provision for a carefully conceived plan of assistance which, on the one hand, will enable farmers to renovate and improve their living conditions and, on the other hand, will permit the more general use of labour-saving devices in the farm home, thus making possible the more general enjoyment of the ordinary comforts and conveniences of urban life. Such a plan should be made a very vital part of a Dominion housing scheme and if organized on a self-liquidating basis can contribute enormously to the improvement of agricultural living conditions in Canada.

As part of such a national endeavour, consideration should be given to a national home beautification campaign that would have as its objective the painting of rural buildings, including those in our small rural towns, and be organized on a basis that would permit the recovery of the cost in a reasonable number of years. The psychological effect of any national scheme designed to improve the home condition of our people would be enormous and would tend to make better citizens of our people by reason of their increased pride in their homes.

This committee, while urging in the strongest way possible direct and contributory assistance by the Federal Government, does not discuss measures at length here since the whole problem is being treated in detail by the Subcommittee on Housing and Community Planning.

2. Rural Electrification

No single factor could add more to the improvement of living conditions on the farm than the supplying of electrical services. A study of the plans now being promoted for electrifying 25,000 farm homes in Manitoba, of the hydro development in Ontario, and of the rapid extension of services in the United States, emphasizes the growing demand, as well as the social and economic advantages consequent to the electrical energizing of rural areas. Many provinces in Canada are now exploring ways and means of providing these services and there can be no doubt as to the need and desirability of such a development.

The electrifying of the rural areas of Canada would appear to be a sound post-war project. It would directly and indirectly supply employment to a large number of men, bring many essential services to farm homes, and provide improved living conditions and power for labour-saving appliances, including refrigeration, as well as for the operating of much of the equipment employed on the farm, such as feed-grinders, fanning-mills, wood-sawing equipment, milking machines, etc. In addition, the electrification of rural areas would greatly facilitate the diversification of industry and the establishment of small manufacturing and processing plants.

To provide any adequate system of rural electrification in most provinces of Canada will require a very heavy capital investment, the annual charges of which cannot be met by practical rates and charges unless the money is made available at low rates of interest. It would appear that Federal assistance would be necessary, the Dominion Government making loans to the Provinces repayable over a number of years.

If, as is generally assumed, the Dominion Government will have to take up some of the slack of employment during the post-war period by Government work projects, it is suggested that the construction of transmission lines and generating plants might well form an important part of any such projects, these works when completed to be turned over to the Provinces on a basis which would make possible a reasonable rate structure.

3. Canadian Handicrafts

The value of encouraging art and craft activities in our Canadian homes is generally acknowledged throughout the whole of Canada. The benefits flowing from such activities may be summarized as follows:—

- (a) Improved cultural, educational, social and economic conditions in the home.
- (b) Encouragement to possible small rural industries.
- (c) Utilizing the services of professional craftsmen.
- (d) Increasing points of interest to tourists.
- (e) The development of a distinctive Canadian appreciation of art, sculpture, crafts, etc.

Many individuals, groups, institutions and community organizations throughout Canada are lending their support to this worthy endeavour, but it seems necessary now to bring to their support a well-organized national effort.

The Subcommittee therefore recommends that the Government should make, as early as possible, a carefully planned and complete national survey of the efforts now being made to promote handicrafts in Canada and on the basis of the information then revealed determine the exact nature and extent of services which the Government could appropriately offer towards promoting useful hand arts and crafts among the Canadian people.*

4. Community Cultural Centres

The Subcommittee also believes that much can be done by way of developing cultural influences among our rural people. For instance, encouragement should be given rural communities to organize themselves on a co-operative basis, subscribing possibly 15 per cent of the capital necessary for the building of community halls, etc., and the Dominion Government in co-operation with the Provincial Governments providing the remainder by way of a loan to be repaid in 15 to 20 years. The local organization would be responsible for organizing various community activities, both of an educational and recreational character, promoting adult education and a finer sense of democratic citizenship. The facilities of the National Film Board of Canada and similar organizations could be used to bring to the rural people a much more complete and fuller knowledge of our country and its resources and a truer appreciation of everything that tends to the creation of an intelligent citizenship and a worthwhile community.

* The following references on this subject are recommended:

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